DOCUMENT RESUME

ED 085 418 TM 003 360

| | |
|---|---|
| AUTHOR | Kent, William P. |
| TITLE | A Longitudinal Evaluation of the Adult Basic Education Program. |
| INSTITUTION | System Development Corp., Falls Church, Va. |
| SPONS AGENCY | Office of Education (DHEW), Washington, D.C. Office of Planning, Budgeting, and Evaluation. |
| REPORT NO | TM-WD-5743 |
| PUB DATE | Nov 73 |
| CONTRACT | OEC-0-71-3706 |
| NOTE | 220p. |
| EDRS PRICE | MF-$0.65 HC-$9.87 |
| DESCRIPTORS | Achievement Gains; *Adult Basic Education; Adult Characteristics; Adult Students; Compensatory Education Programs; *Educational Benefits; Educational Improvement; *Educationally Disadvantaged; Employment Patterns; *Longitudinal Studies; Program Administration; Program Effectiveness; *Program Evaluation; State Programs; Student Evaluation |
| IDENTIFIERS | *Adult Education Act of 1966 |

ABSTRACT

This study represents the first nationwide evaluation of programs funded under the Adult Education Act. Data were gathered across a variety of adult basic education programs (ABE), and a representative sample of 2300 program participants was studied longitudinally through a series of basic skills tests and interviews covering pre- and post-program income, work experience, educational aspirations, and opinions related to participants in ABE experiences. Information was also collected on program and classroom characteristics to form a basis for assessing the relationship between post-program performance and the kind of experience that enrollees received. This involved interviews with local ABE administrators and instructors regarding program costs, enrollee attendance, staff qualifications, instructional and guidance methods, and administrative procedures. Student evaluations of their ABE experiences and program and class cost data are analyzed. Methodological recommendations for future evaluations of adult basic education programs are discussed. The questionnaires in the study are included in the appendices. For related documents see TM003354-57 and TM003398. (EH)

ED 085418

# SYSTEM DEVELOPMENT CORPORATION

FILMED FROM BEST AVAILABLE COPY

TM 003 360

FINAL REPORT

TM-WD-5743

# A LONGITUDINAL EVALUATION OF THE ADULT BASIC EDUCATION PROGRAM

NOVEMBER 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

PREPARED FOR

OFFICE OF PLANNING, BUDGETING AND EVALUATION

U.S. OFFICE OF EDUCATION

ED 085418

TM 003 360

Final Report

TM-WD-5743

Contract No.: OEC-0-71-3706

# A Longitudinal Evaluation of the Adult Basic Education Program

William P. Kent, Principal Investigator

System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

November 1973

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view and opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education

Office of Planning, Budgeting and Evaluation

TABLE OF CONTENTS


| | | Page |
|---|---|---|
| Acknowledgments | | vi |
| Section 1 - Executive Summary | | 1-1 |
| I. | Objectives and Scope of the Study | 1-1 |
| II. | Methodology | 1-2 |
| III. | Types of Findings | 1-3 |
| IV. | ABE Programs and Classes | 1-3 |
| V. | Characteristics of ABE Students | 1-4 |
| VI. | Attendance and Motivation | 1-5 |
| VII. | Longitudinal Changes in Students | 1-5 |
| | A. Improvements in Test Scores | 1-5 |
| | B. Gains in Employment and Earnings | 1-7 |
| | C. Changes in Educational Aspirations | 1-7 |
| VIII. | Student Evaluations of ABE | 1-7 |
| IX. | Relationships Between Program Characteristics and Effects on Students | 1-8 |
| X. | Cost Data | 1-8 |
| XI. | State and Local Approaches to Establishing Classes and Using Innovations | 1-9 |
| XII. | Methodological Recommendations for Future Evaluations | 1-10 |
| XIII. | Positive Effects on Participants | 1-10 |
| Section 2 - Findings | | 2-1 |
| I. | Introduction | 2-1 |
| | A. Organization of This Report | 2-1 |
| | B. Summary of Focus and Procedures | 2-1 |

| | | Page |
|---|---|---|
| II. | Student Demographic and Educational Characteristics | 2-3 |
| | A. Sex and Race | 2-3 |
| | B. Language Most Often Spoken in the Home | 2-4 |
| | C. Age | 2-5 |
| | D Last Grade of School Completed | 2-5 |
| | E. Previous Attitude Toward School | 2-6 |
| III. | ABE Attendance and Students' Educational Goals | 2-7 |
| | A. Year First Enrolled | 2-7 |
| | B. Expected Future Attendance and Reasons for Not Coming | 2-8 |
| | C. Actual Attendance as Reported by Teachers | 2-10 |
| | D. Actual Attendance as Reported by Students | 2-11 |
| | E. Motivation | 2-12 |
| | F. Way First Heard About ABE | 2-13 |
| | G. Educational Goals | 2-14 |
| | H. Help to School Children | 2-16 |
| IV. | Employment and Earnings | 2-16 |
| | A. Job and Welfare Status | 2-17 |
| | B. Hours of Work and Earnings, Fall, 1971 | 2-18 |
| | C. Changes in Hours of Work and Earnings, 1971-73 | 2-20 |
| | D. Job Hunting Experience | 2-24 |
| | E. View of Employment Prospects | 2-26 |
| | F. Previous Military Service | 2-28 |
| | G. Relationship of Welfare Status to Previous Schooling | 2-28 |
| | H. Relationship of ABE to Employment | 2-29 |
| V. | Achievement Test Data | 2-31 |
| | A. Initial Tests | 2-31 |
| | B. Gains Between Tests | 2-32 |
| | C. Initial Test Results and Previous Schooling | 2-33 |
| | D. Initial Test Results and Demographic Characteristics | 2-36 |
| | E. Initial Test Results and Employment and Welfare Status | 2-37 |
| | F. Initial Test Results and Gains Between Tests | 2-38 |
| | G. Attendance and Gains Between Tests | 2-40 |
| | H. Relationships Between Test Gains and Other Data | 2-41 |
| | I. Comparisons with Selected MDTA Basic Education Enrollees | 2-43 |
| VI. | Student Opinions | 2-46 |
| | A. Student Evaluations of ABE | 2-46 |
| | B. Evaluations of Self-Improvement | 2-49 |
| VII. | Local Program and Class Characteristics | 2-49 |
| | A. Program Characteristics | 2-52 |
| | B. Class Schedule and Enrollment | 2-52 |
| | C. Instructional Staff | 2-56 |
| | D. Instructional Goals | 2-57 |
| | E. Instructional Methods and Materials | 2-58 |

Page

VIII. Program and Class Cost Data . . . . . 2-60
A. Sources of Local ABE Program Funds. . . . . 2-61
B. Program Expenditure Categories. . . . . 2-63
C. Instructional Pay Rates and Class Costs . . . . . 2-65

IX. Methods of Meeting State and Local Needs for ABE. . . . . 2-67
A. Methods of Establishing ABE Classes . . . . . 2-68
B. Use of Results of Innovative Projects . . . . . 2-71

X. Relationships Between Program Characteristics and Effects on Students . . . . . 2-73

Section 3 - Methodology and Application to Other ABE Evaluations . . . 3-1

I. Introduction. . . . . 3-1

II. Objectives and Scope. . . . . 3-1
A. Objectives. . . . . 3-1
B. Scope and Limitations . . . . . 3-2
C. Comments on Applicability to Other Evaluations. . . . . 3-3

III. Overall Design and Planning . . . . . 3-4
A. Allowing Time for Planning, Approvals, and Revisions. . . . 3-4
B. Control Groups. . . . . 3-5

IV. Sampling. . . . . 3-6
A. Estimate of the Universe to be Sampled. . . . . 3-7
B. Sample Design and Selection . . . . . 3-7
C. Replacements. . . . . 3-9
D. Comments. . . . . 3-10

V. Contacts, Permissions, and Arrangements . . . . . 3-10
A. Confidentiality . . . . . 3-10
B. Permissions and Arrangements. . . . . 3-11

VI. Achievement Testing . . . . . 3-12
A. Test Selection. . . . . 3-12
B. Testing Procedures. . . . . 3-14
C. Comments. . . . . 3-15

VII. Questionnaires. . . . . 3-15
A. Development, Pre-Test, and Approval . . . . . 3-15
B. Questionnaire Data Collection . . . . . 3-16
C. Questionnaire Processing. . . . . 3-18
D. Comments. . . . . 3-19

| | | Page |
|---|---|---|
| VIII. | Attendance Data | 3-20 |
| IX. | Data Counts | 3-21 |
| X. | Supplementary Data | 3-24 |
| | A. General Comments | 3-24 |
| | B. Census Data | 3-25 |
| XI. | Analysis and Reporting | 3-26 |
| | A. Data Analysis | 3-26 |
| | B. Reports | 3-28 |
| Section 4 - Appendixes | | 4-1 |
| A. | Details of the Sampling Plan | A-1 |
| B. | Instructions for Administering Tests | B-1 |
| | Test Material Transmittal Letter | B-2 |
| | ABE Testing Package - Cover Sheet | B-4 |
| | Directions for Administering Tests | B-5 |
| C. | Reproductions of Questionnaires and Related Forms | C-1 |
| | ABE Class Locator and Roster of Enrollees as of November 15, 1971 | C-3 |
| | Students to be Interviewed | C-7 |
| | Form E1. Initial Enrollee Interview | C-8 |
| | Form E2. Post-Program Enrollee Interview | C-19 |
| | Form E3. Second Post-Program Enrollee Interview | C-30 |
| | Form SP. State ABE Program Administrator Interview Guide | C-37 |
| | Form P. ABE Program Administrator Interview | C-42 |
| | Form CL. ABE Class Instructor Interview | C-49 |
| | Class Attendance Summary for Students Participating in U. S. Office of Education Study of ABE | C-56 |
| | Follow-Up Letter on Attendance Summaries | C-57 |
| | Comment on Form E2, Question 19 | C-58 |
| D. | Illustrative Confidence Intervals | D-1 |
| E. | Illustrative Results of Multiple Regression Analyses | E-1 |
| | Introduction | E-1 |
| | Variables Used | E-2 |
| | Multiple Regressions with Class as Unit of Analysis | E-6 |
| | Multiple Regressions with Student as Unit of Analysis | E-8 |
| | Geographical Differences in Educational Gains | E-11 |
| | Conclusions | E-12 |

Page

F. Abstract of a Multiple Discriminant Analysis Based on Data from This Study. . . . . F-1

G. Description of Magnetic Tape Data Files . . . . . G-1
Overview of Tape Contents . . . . . G-1
Technical Characteristics of the Tape . . . . . G-1
IBM System 360 Job Control Language (JCL) for Accessing Tape Files. . . . . G-1
Conventions Used in Naming Data Sets (Files). . . . . G-2
Contents of Tape Files. . . . . G-2
Conventions Used in Naming Variables. . . . . G-4
Tape Dump . . . . . G-6
References Cited in This Appendix . . . . . G-6

List of Tables

Table 2-1. Types of ABE Enrollees Excluded from This Study . . . . . 2-3

Table 2-2. Calendar Reference Points for Student Employment and Earnings. . . . . 2-16

Table 2-3. Local ABE Program Fund Sources. . . . . 2-62

Table 2-4. Local ABE Program Expenditures. . . . . 2-64

Table 3-1. Data Counts . . . . . 3-22

Table A-1. Estimates for 1970 of ABE Students in Fifty States, by Region . . . . . A-2

Table A-2. Matrix of ABE Students in Fifty States. . . . . A-6

Table A-3. Measures of Size for the Sampling Matrix. . . . . A-7

Table A-4. Probabilities Proportional to Size. . . . . A-7

Table A-5. Sample Splitting Scheme . . . . . A-9

Table A-6. Composition of Sample Halves. . . . . A-9

Table A-7. 1970 Data on States Selected for Sample . . . . . A-10

Table E-1. Independent Variables Included in All Multiple Regressions with Student as Unit of Analysis. . . . . E-3

Table E-2. Multiple Regression Results . . . . . E-9

ACKNOWLEDGMENTS

This study has received support and assistance from a large number of individuals and educational offices. We are most grateful for the interest and cooperation we have received at every level -- Federal, [illegible] and local. We are particularly indebted to those who responded to the study's questionnaires -- 15 State ABE program directors, nearly 300 local program administrators and classroom instructors, and 1,443 students.

Consultants and subcontractors who have assisted the study include:

Dr. Barbara Bryant, Market Opinion Research, Detroit
Jane Burnett, Grabo Research, Inc., Detroit
Wilma Goldstein, Market Opinion Research, Detroit
Dr. C. Hugh Greenup, Los Angeles
Dr. William S. Griffith, University of Chicago
Dr. James Grunig, University of Maryland
Dr. Raymond J. Jessen, UCLA
Dr. Zivia Wurtele, Los Angeles

Members of the System Development Corporation project staff have included:

Robert L. Bishop
F. D. Bullock
Steven M. Frankel
Paula Gerber
Milton R. Goldsamt
Mildred A. Henderson
William P. Kent
Raymond B. Tillery

The Office of Education Project Officers for the study have been Mary Ann Millsap and Priscilla Dever, Office of Planning, Budgeting and Evaluation.

## SECTION 1 - EXECUTIVE SUMMARY

### I. OBJECTIVES AND SCOPE OF THE STUDY

This study represents the first nationwide study of Adult Basic Education (ABE) programs funded under the Adult Education Act of 1966, as amended. As part of the larger War on Poverty effort, Congress established in 1964 a program specifically designed to help undereducated adults through the Economic Opportunity Act and later through the Adult Education Act. The original priority population group for ABE was adults from 18 to 44 years of age with less than 8 years of schooling. Later, the minimum age was dropped to 16 years, and the target population was broadened to include all persons with less than 12 years of schooling.

Under the Adult Education Act, ABE programs are developed and operated by the States. The U. S. Office of Education distributes the bulk of the Federal funds for ABE to States through formula grants, with each State required to provide at least 10 percent in matching funds. Allocations within States are made under State direction for use by local educational and private non-profit agencies. In addition to State grants, from 10 to 20 percent of Federal ABE funds are used for innovative projects and teacher training programs. From FY 1965 through FY 1972, some $320 million in Federal funds were appropriated for ABE.

The data presented in this report were collected primarily to assist in evaluating the effects of the ABE program on its priority group of students -- adults from 18 to 44 years of age with less than 8 years of schooling. Students over 44 years old were excluded from the study, as were certain other specialized types of students (migrants, institutionalized students, and students in classes emphasizing English as a Second Language). There were approximately 500,000 students enrolled in the ABE program in FY 1970; 280,000 of these fell within the study's scope.

Additional objectives of the study were to provide data comparable with those being collected in other studies of ABE and to discover relationships between students' post-program performance and their ABE experiences. Data were also gathered on the extent to which local programs incorporate the results and products of innovative projects, especially those funded through section 309 of the Adult Education Act. Information was also collected to help assess the extent to which States identify and serve those adults who are in greatest need of education below the high school level.

## II. METHODOLOGY

The study began in mid-1971 and continued for more than two years. Information was collected on the effectiveness of ABE in improving literacy, in raising earnings, and in increasing intangible personal benefits. Data were gathered across a variety of adult education programs, and a representative sample of program participants was studied over an 18-month period through a series of interviews and basic skills tests. Data were also collected on program and classroom characteristics, as well as on methods for establishing and improving ABE classes.

Students were tested twice and interviewed three times. The interval between tests was usually four months; follow-up interviews were obtained at intervals of 12 and 18 months after initial interviews. Interview forms were specially developed for this study; a test battery (portions of the TABE -- Tests of Adult Basic Education) was selected from existing standardized tests after a thorough review of the comparative advantages and disadvantages of available instruments.

The sample investigated included 2,300 students in 200 classes, 90 programs, and 15 States. The sample was selected so as to be national in scope; no attempt was made to describe or evaluate ABE programs in particular regions or localities.

Data collected were coded to ensure confidentiality and were stored in magnetic files for computer processing.

## III. TYPES OF FINDINGS

The summary presented in this section briefly describes ABE programs and classes, then presents data on students, including information on improvements in test scores and in earnings during the period covered by the study. Program and class cost data are summarized, and State and local approaches to establishing new classes and using innovations are discussed. Methodological recommendations for future ABE evaluations are mentioned. Finally, positive effects on students associated with the ABE program are listed.

## IV. ABE PROGRAMS AND CLASSES

The typical local program surveyed was operated by a school district and had been in existence since around 1966. Programs consisted of from one to 325 classes offered during the year, the average being 43 classes. Almost all program directors felt reasonably certain that their programs would continue for at least the next two years.

Most ABE classes meet in school buildings two evenings a week, from September through May. An average class session is around 3 hours. Enrollment in classes in November, 1971, ranged from 3 to 80; the average enrollment was 16 students.

ABE classes offer instruction at many different levels, from beginning reading to high school subjects. A single class will frequently involve all grade levels from one through eight.

A class is usually taught by a certificated teacher with more than two years of ABE experience. Almost all teachers have received special training for ABE, but are assigned to ABE only part-time. Comparatively few classes (17%) have paraprofessional aides to assist the teacher; only 7% of classes have assistance from unpaid volunteers. Most teachers and around half of the aides and volunteers are of the same race as the majority of their students.

Instructional goals in ABE classes usually give greatest emphasis to reading and mathematics, but other types of goals are also frequently present. Subordinate goals include preparation for job improvement, writing, preparation for high school studies, and "life skills" (e.g., voting and money management).

Instructional materials and methods in ABE classes are almost always adapted at least to some extent to adult students, although a small percentage of classes admittedly use materials and procedures designed for school children. Instruction is very frequently individualized, with students determining their own rates of progress. Students often have some role in selecting and evaluating their goals, methods, and materials. Frequently students help instruct each other. Programmed instruction is usually not emphasized.

Although three-quarters of ABE classes have some type of mechanical equipment available (usually tape recorders, filmstrip projectors, or the like), this equipment is not often used. Few classes claimed to use any type of equipment even as frequently as once a month.

## V. CHARACTERISTICS OF ABE STUDENTS

Female students outnumbered males by 62% to 38%; whites slightly outnumbered blacks. About 9% of the students sampled spoke Spanish most often in their homes. All ages from 16 to 44 were represented in the sample, with younger students (16-29) somewhat outnumbering older students (30-44).

More than half the students had completed 9 grades or more of schooling, even though they were enrolled in studies designed primarily for the 8th grade level and below. About 15% had high school diplomas or certificates, and a few had attended college. Most of those who had not finished high school had dropped out because of marriage, having to go to work, or the like. Only about one-fourth voluntarily left school.

Responses to initial interviews indicated that students' educational goals were high -- all but a few thought they would try for a high school credential, and more than half thought they would attend college some time. About 70% intended to enroll for additional vocational or technical training.

Over one-fourth of the students gained a full grade or more in reading achievement during the four months between tests; nearly one-fifth gained a full grade or more in mathematics achievement. On the other hand, approximately one-third of all students made no gain at all or even lost ground during the four-month interval.

Initial test scores were somewhat related to amount of previous schooling, although most students scored at grade levels well below those which they had previously completed in school. Initial scores were also somewhat related to race, sex, and age (whites, females, and younger students tended to score higher than blacks or other minorities, males, and older students).

Gains between tests were highest, on the whole, for students with the lowest initial scores. For those with initial scores below the fifth grade, the average gain was 0.8 grades in both reading and mathematics. Gains between tests showed no clear relationship with race, age, or previous schooling. Females gained slightly more than males, even though they started at somewhat higher levels.

Gains in test scores showed no statistically significant relationships to student attendance between tests.

During the same school year (1971-72) in which this study's tests were given, approximately the same tests were given to students enrolled in a different group of basic education classes: those conducted by the Manpower Development and Training Act (MDTA) Institutional Training Program. Although for several reasons the data from these two studies are not strictly comparable, it is of interest to note that rather similar test gains were obtained. The MDTA study showed an average reading gain of 0.4 grades after 54 hours of instruction, in comparison with the present study's average of 0.5 grades after 98 hours.

At the time of the study's first interviews, in February and March of 1972, about half of the students were employed. For those who worked, median income was $300 a month, but there were wide variations both above and below the median. Only about one-quarter of the students received welfare or public assistance. Less than 20% had recently had serious problems in finding jobs, and almost all who were employed felt fairly secure. Most of those who were not employed believed that when they had completed the basic education program, their chances of finding a job would be significantly improved.

## VI. ATTENDANCE AND MOTIVATION

At the time of initial interviews, nearly one-quarter of the students had started the program more than a year previously; a good number had been attending for several years. Almost all expected to attend class every time or most of the time in the future. Motivation for coming was primarily educational rather than job-related. Main interests were reading and working with numbers, with comparatively small interest in writing as a separate subject for learning.

Student turnover is large, even though many students attend regularly. Of students enrolled in November 1971, less than 40% were still attending in May 1972. Almost all classes have open enrollment, accepting new students at any time.

## VII. LONGITUDINAL CHANGES IN STUDENTS

### A. IMPROVEMENTS IN TEST SCORES

Students were given standardized reading and mathematics tests in January 1972 and were retested in May 1972. Average scores on initial tests showed achievement at the fifth grade level for reading and at the sixth grade for mathematics. Mean grade level gains between tests were half a grade for reading and three-tenths of a grade in mathematics. Thus in a four month period (less than half of a usual ten-month school year), the average student gained half a year's reading achievement. The mean number of class hours of instruction between tests was 98.

B. GAINS IN EMPLOYMENT AND EARNINGS

From 1971 to 1973, the ABE students who were interviewed steadily increased their employment and earnings. During the last quarter of 1971, when all interviewees were enrolled in the ABE program, 58% had some job earnings; this increased to 70% in final interviews 18 months later, by which time most respondents were no longer attending ABE. At the time of the first interviews, 26% of students were on welfare or receiving public assistance; this decreased to 22% in final interviews. Improvement in the earnings of those who worked was substantial, averaging a little over 20% during the 18-month interval -- from a mean of $336 per month to a mean of $407 per month.

Gains in earnings were large enough and well-enough substantiated to be almost certainly real rather than merely the result of selective reinterviewing, increases in hours of work, inflation, or other general causes of wage fluctuations.

C. CHANGES IN EDUCATIONAL ASPIRATIONS

Over an 18-month period, students were asked about their plans for continuing their education. Both at the beginning and at the end of this period, around two-thirds planned on additional vocational or technical training. However, the number of students planning to obtain a high school diploma declined somewhat (from 93% to 81%), and the number planning to attend college declined substantially (from 60% to 37%). The drop in the percentage of those thinking about going to college may be the result of students acquiring more realistic views of their academic abilities or of the time and effort required before entering college.

## VIII. STUDENT EVALUATIONS OF ABE

Both during and after their enrollment in the program, students appeared well-satisfied with their ABE experiences. Almost all liked the methods and materials used and found their teachers helpful. Most of them also gave ABE at least some credit for job and wage improvements.

Although 40% of the students spent a lot of time learning by themselves, using books or instructional materials such as worksheets or machines, most students preferred learning by working with a teacher. Students were about equally divided as to their preference for learning with a teacher individually or working with a teacher as a part of a group. Only a small minority (16%) preferred learning alone with books or instructional materials.

## IX. RELATIONSHIPS BETWEEN PROGRAM CHARACTERISTICS AND EFFECTS ON STUDENTS

Students generally had very positive opinions about their ABE experiences and about their improvement in reading, writing, and mathematics. Most students also gave ABE credit for job and earnings improvements. However, in spite of extensive statistical analyses of the data collected during this study, no clear or convincing relationships could be discovered between program characteristics or classroom methods and the differential gains students made in earnings and in academic achievement.

Multiple regression and discriminant analyses explored classroom variables, attendance patterns, and individual student characteristics in an attempt to find program features that would tend to be successful in improving either the test scores or the earnings of at least some types of students. It was thought, for example, that programmed instruction, intensity of instruction, or the use of teacher aides might show some demonstrable relationship to student improvement. However, analytic results were insufficiently clear-cut to form a reasonable basis for programmatic recommendations.

## X. COST DATA

Informal cost estimates were supplied by local program directors and by teachers. These figures indicate that total mean annual expenditures are around $4,000 per ABE class per year. Since the average class enrollment in November, 1971, was 16 students, average total annual expenditures are $250 per enrollment at any one time, if it is assumed that student turnover maintains the enrollment of each class at a steady number.

At the local level, around 79% of ABE program funds are estimated to be Federal; 12% are State, 7% are local (including, in some instances, contributions in facilities or services rather than in cash), and 2% are miscellaneous other.

About 60% of expenditures by local programs are for instructional salaries and benefits, 14% are for administration, 7% for clerical support, 5% for guidance and counseling, and 5% for books, supplies, and equipment. Only 40% of programs have any specific funds allocated for counseling and advisement; still fewer have specific funds for recruiting students (19%), for training teachers (15%), or for program evaluation and improvement (11%).

Pay to teachers reported in 1972 averaged $6.20 per hour and ranged from $3.50 to over $11.00 an hour. The most frequent pay rate was $5.00 an hour. Paraprofessional aides were paid from 50 cents to $5.62 an hour, the average being $2.50 per hour.

## XI. STATE AND LOCAL APPROACHES TO ESTABLISHING CLASSES AND USING INNOVATIONS

Little evidence could be found that ABE programs are established, or that students are recruited, in such a way as to deliberately seek out unusually hard-to-reach adults. Target populations are described very broadly, using such standard criteria as "sixteen years of age or older and functioning below an eighth grade level." Program and class locations in 1971-72 appeared to be established to a large extent on the basis of continuity from the preceding year.

State and local directors of ABE were asked about the use of innovative methods and materials developed by special or demonstration ABE projects. From the point of view of State directors, innovative results are widely used, although few specific innovations are used in more than one State. However, the use of these innovations could not be confirmed in the local programs and classes investigated.

## XII. METHODOLOGICAL RECOMMENDATIONS FOR FUTURE EVALUATIONS

Section 3 of this report contains a description and a critique of the methodological procedures used in this study, along with recommendations for adapting those procedures to State and local evaluations. Some of the detailed recommendations made relate to the desirability of studying persons who need (but do not enroll in) ABE, to the need for improved ABE testing instruments, and to problems that could be avoided by obtaining advance commitments from grantees for cooperation in authorized evaluation activities. A more general methodological suggestion arises from this study's failure to pinpoint relationships between program characteristics and effects on various types of students. It may be that the causal relationships being sought are too complex to be amenable to survey-type investigation based on data collected through questionnaires. As an alternative or supplemental methodology, limited but detailed research, combined with actual and ongoing program development, evaluation, and improvement should be considered for sustained support over a period of several years, focused on a few exemplary local ABE programs.

## XIII. POSITIVE EFFECTS ON PARTICIPANTS

The following paragraphs summarize the positive effects of the ABE program on the students tested and interviewed:

- Reading and mathematics achievement gains occurred
  - The average gain in reading (over only four month's time) was half a grade; in mathematics it was three-tenths of a grade.
  - 26% gained a full grade or more in reading in only four months; 19% gained a grade or more in mathematics.
  - 7% gained two grades or more in reading in four months; 4% gained two grades or more in mathematics.
  - Students initially tested below the fifth grade level had an average gain of eight-tenths of a grade, both in reading and in mathematics.

- Two-thirds of all students tested achieved gains in reading, and two-thirds achieved gains in mathematics.
- Over a year's time, almost all students believed their abilities in reading, writing, and working with numbers had increased at least to some extent. Nearly half believed their abilities in reading and working with numbers had increased very much; one-third believed their writing ability had increased very much.

- ABE helped in getting salary increases
  - 66% of those working in February-March, 1973, had received a pay increase since October, 1972.
  - 15% of these individuals believed that ABE helped very much, 20% that it helped some, and 12% that it helped a little in obtaining this increase.
- Steady gains in employment occurred
  - In an 18-month period, the percentage of those working increased from 55% to 65%.
  - The number on welfare decreased from 26% to 21%.
- Earnings of those who worked definitely increased
  - Over a year's time, from the end of 1971 to the end of 1972:
    - Mean monthly earnings increased 13%, from $336 to $378 per month.
    - Mean hourly earnings increased 11%, from $2.28 to $2.52 per hour.
    - Two-thirds of those who worked increased their monthly earnings.

- One-fifth of those who worked increased their monthly earnings $100 or more.
- The mean gain was $48 per month.

- In the first six months of 1973, earnings gains continued at a rate equal to or greater than the previous year's rate.
- Earnings increased at a rate considerably greater than could be accounted for by inflation.
- Extrapolating from the sample to the total number of similar ABE students in the U. S. in November, 1971, total increase in job earnings in a one year period would be $46,000,000.

- ABE helped on the job
  - Three-quarters of those who worked felt they were helped by ABE in their jobs.
  - Nearly half of those who worked had new jobs since beginning ABE; the great majority preferred their new jobs.
- Students had high opinions of ABE methods, materials, and staff
  - 69% liked ABE methods better than those of grade school.
  - Almost all found that teaching materials (books, tapes, etc.) were interesting; 57% thought they were "very interesting."
  - A fourth of the students stated that the instructional staff spent sizable amounts of time in working individually with them.
  - 90% found the degree of help provided by the teacher excellent or good.

# SECTION 2 - FINDINGS

## I. INTRODUCTION

### A. ORGANIZATION OF THIS REPORT

In order to present the findings of this study in as straightforward a manner as possible, this section concentrates on major, reasonably well substantiated conclusions. Methodological procedures are discussed later in Section 3. Technical details of interest to more specialized readers are reserved for the several appendixes which constitute Section 4.

In this section, principal findings are summarized in bar charts; tables provide additional details. Comments in the text point out highlights and add extracts from narrative responses not suitable for tabular presentation.

### B. SUMMARY OF FOCUS AND PROCEDURES

The data presented in this report were collected to assist in evaluating the basic education programs funded through the Adult Education Act of 1966, as amended As part of the larger War on Poverty effort, Congress established in 1964 a program specifically designed to help undereducated adults through the Economic Opportunity Act and later through the Adult Education Act. The priority population group was adults from 18 to 44 years of age with less than 8 years of schooling. Since then, the minimum age has been dropped to 16 years, and the target population has been broadened to include all those with less than 12 years of schooling. Under this program, Federal funds are distributed through State formula grants, with each State required to provide 10 percent in matching funds. Allocations within States are made by State educational agencies for use by local educational and private non-profit agencies. From 10 to 20 percent of total Federal funds are used for innovative projects and teacher training programs. From FY 1965 through FY 1971, some $260 million in Federal funds were appropriated for this program. The FY 1972 appropriation was $61.3 million.

The study here reported represents the first nationwide evaluation of programs funded under the Adult Education Act. It began in mid-1971 and continued for more than two years. Information was collected on the effectiveness of adult education activities in improving literacy, in raising the earning capabilities of participants, and in increasing intangible personal benefits. The 16-44 year old group with less than an 8th grade education was the primary group studied, just as it is the priority group established in the legislation.

Data were gathered across a variety of adult education programs, and a representative sample of program participants was studied longitudinally through a series of interviews and basic skills tests. The first interviews were conducted in February and March, 1972; interviews 12 and 18 months later collected data on post-program income, work experience, educational aspirations, and opinions related to participants' ABE experiences. Standardized tests of basic skills (TABE -- Tests of Adult Basic Education) were administered during the Winter and Spring of 1972. At the same time, data were collected on program and classroom characteristics, to form a basis for assessing the relationships between post-program performance and the kind of experience that enrollees received. This involved interviews with local ABE administrators and instructors regarding program costs, enrollee attendance, staff qualifications, instructional and guidance methods, and administrative procedures. In addition, information on methods for establishing and improving ABE classes was collected from State Directors of Adult Basic Education.

The present study is national in scope and makes no attempt to describe or evaluate programs in individual States or localities. Confidentiality of all data on programs and participants has been a key consideration for the conduct of the study and for the publication of its results.

The national sample investigated included approximately 2300 students in 200 classes, 90 programs, and 15 States representing all U. S. geographic areas. It is important for the reader to recognize that the study was designed to focus on what might be regarded as the central thrust or top priorities of the ABE program. The sample therefore deliberately excluded several types of classes and enrollees, as indicated in Table 2-1.

Table 2-1. Types of ABE Enrollees Excluded from This Study

- Enrollees over 44 years old
- Enrollees in classes primarily offering instruction in GED (high school equivalency) or ESL (English as a Second Language)
- Institutionalized enrollees
- Migrant enrollees

## II. STUDENT DEMOGRAPHIC AND EDUCATIONAL CHARACTERISTICS

Data relating to ABE student demographic and educational characteristics are presented on the following pages. This information was obtained by means of personal interviews with enrollees in early 1972. In addition, supplementary information on race was obtained from classroom teachers.

### A. SEX AND RACE

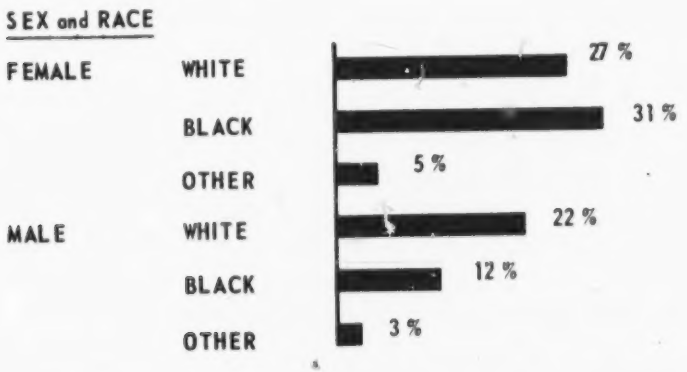
Females considerably outnumber males in the sample.

Race as determined by interviewer observation was limited to the three categories white, black, and other. No attempt was made by interviewers to obtain a further breakdown of race.

As a supplement to interviewer observation of race, teachers were asked to include, in the attendance summaries they provided, the race of each student in the sample "as reported in your State." The races and percentages so indicated were:

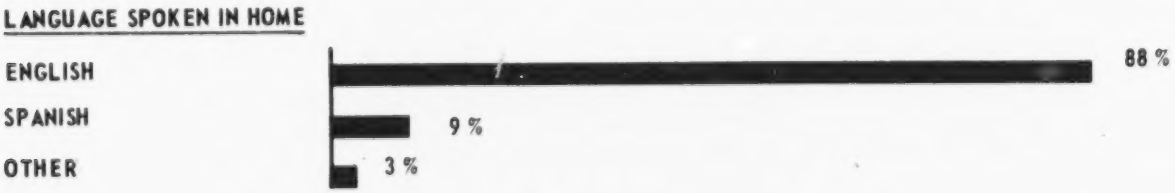
| Race | Percent |
|---|---|
| White | 45.4 |
| Black | 40.9 |
| Spanish American, etc. | 9.6 |
| Indian | 2.7 |
| Oriental | 1.4 |

A breakdown of sex groups by race (as observed by interviewers) shows that although whites slightly outnumber blacks, the largest single sex-race group is black females. The black male group is considerably smaller than the white male group.




B. LANGUAGE MOST OFTEN SPOKEN IN THE HOME

Ten languages other than English or Spanish were mentioned by respondents. The most frequent were Portuguese (0.8%), French (0.6%), and Chinese (0.4%).



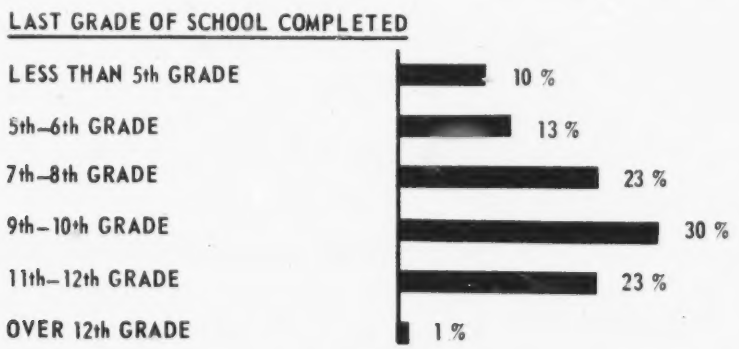
C. AGE

Within the age span of 16-44 to which this study is limited, there is a slight preponderance of younger students over older students. A few students under 16 were enrolled in ABE, even though the classes are not intended for them.

| Age | Percent |
|---|---|
| Under 16 | 0.7 |
| 16-19 | 16.8 |
| 20-24 | 18.6 |
| 25-29 | 18.6 |
| 30-34 | 18.1 |
| 35-39 | 14.2 |
| 40-44 | 13.1 |

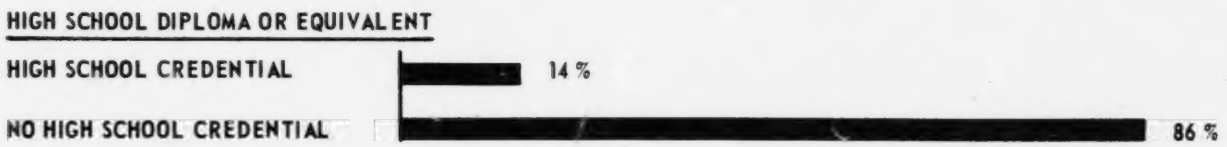
D. LAST GRADE OF SCHOOL COMPLETED

The median response indicated completion of grade 10.2 (i.e., 9th grade plus two-tenths of the tenth grade) -- more than a full grade above the highest level at which the ABE programs studied are designed to operate. Twelve percent of students had completed the 12th grade, 14% had a high school diploma or an equivalency certificate, and a few had attended college.



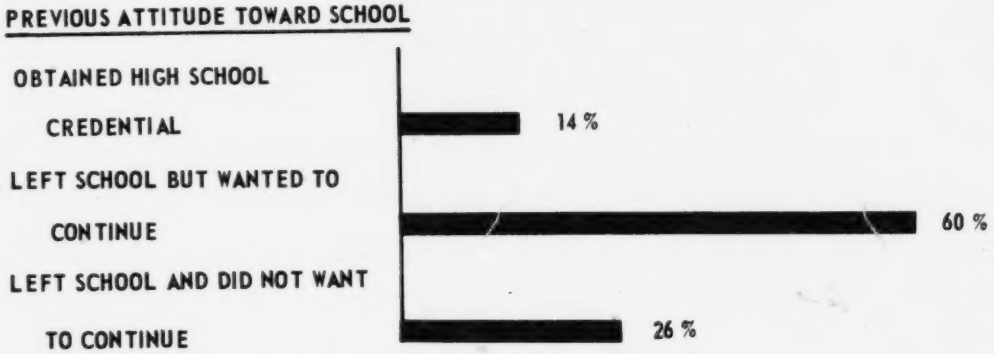
| Last Grade Completed | Percent | Cumulative Percent |
|---|---|---|
| Less than 1 | 1.4 | 1.4 |
| 1 | 0.6 | 2.0 |
| 2 | 1.5 | 3.5 |
| 3 | 3.4 | 6.9 |
| 4 | 3.5 | 10.4 |
| 5 | 4.5 | 14.9 |
| 6 | 8.7 | 23.6 |
| 7 | 8.3 | 31.9 |
| 8 | 14.8 | 46.7 |
| 9 | 15.4 | 62.1 |
| 10 | 14.1 | 76.2 |
| 11 | 11.0 | 87.2 |
| 12 | 12.0 | 99.2 |
| Over 12 | 0.8 | 100.0 |

Median grade completed: 9th grade plus 0.2 years (i.e., grade 10.2)




E. PREVIOUS ATTITUDE TOWARD SCHOOL

The great majority of students in ABE classes either finished high school or involuntarily dropped out of school. Only about one-fourth (26%) voluntarily left school. The most frequently given reasons for leaving school were having to go to work (21%) and marriage (13%).


PREVIOUS ATTITUDE TOWARD SCHOOL
OBTAINED HIGH SCHOOL CREDENTIAL
14 %
LEFT SCHOOL BUT WANTED TO CONTINUE
60 %
LEFT SCHOOL AND DID NOT WANT TO CONTINUE
26 %

| If No H.S. Credential (86%), Main Reason Left School | Percent |
|---|---|
| Wanted to go to work | 5% |
| Had to go to work for money | 21% |
| Military service | 1% |
| Marriage | 13% |
| Medical or pregnancy | 11% |
| Not doing well in school | 10% |
| Doing all right but did not like school | 7% |
| Other | 18% |

"Other" responses were extremely varied. Frequently mentioned were unavailability of schools, moving around, and parents who didn't approve of continuing school.

## III. ABE ATTENDANCE AND STUDENTS' EDUCATIONAL GOALS

Information relating to attendance and educational motivation was collected from teachers and also in a series of three interviews with students over an 18-month period. Data from these different sources were fairly consistent. In this section, data sources are identified as follows:

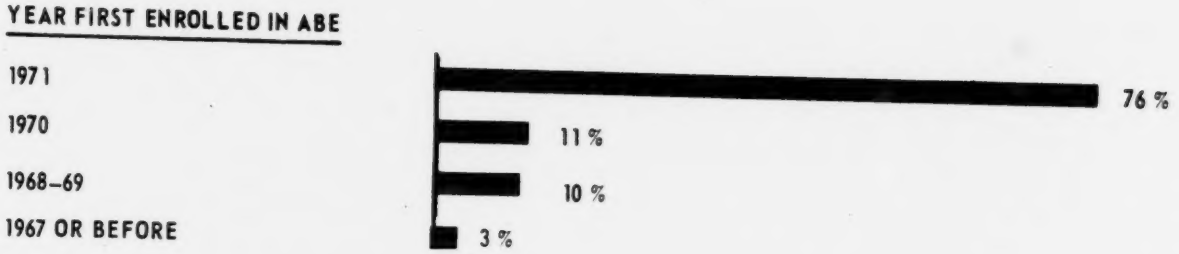
"Teacher report" = attendance summary prepared by the classroom teacher in June, 1972.

"Initial student interview" = personal interview in February or March, 1972.

"Follow-up interview" = interviews with students in February-March, 1973 and/or July-August, 1973.

### A. YEAR FIRST ENROLLED

At the time of initial interviews, about one-fourth of the students had been enrolled in ABE classes over a period of two years or more; 13% had been enrolled for 3 years or more.

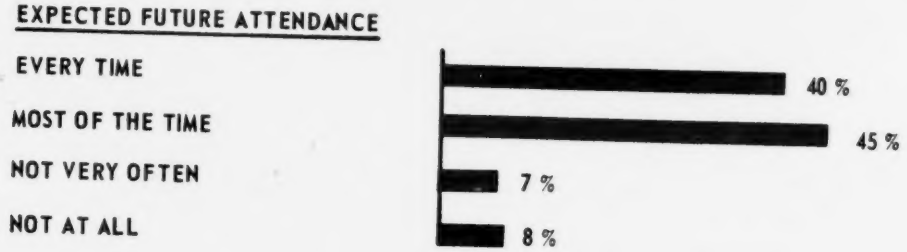



| Year First Enrolled in ABE | Percent |
|---|---|
| 1971 | 76.2 |
| 1970 | 10.9 |
| 1969 | 7.2 |
| 1968 | 2.8 |
| 1966-67 | 1.4 |
| 1965 or before | 1.5 |

Teacher reports show a smaller percentage of students enrolled before 1971 (14.2% as opposed to the 24.8% stated by the students themselves). However, it is probable that students have better information on their enrollment in prior years, since they may have changed classes or teachers.

B. EXPECTED FUTURE ATTENDANCE AND REASONS FOR NOT COMING

Expected future attendance is high, with 85% of all respondents to initial student interviews stating that they plan to attend every time or most of the time in the future. Less than 4% of the total indicated that program deficiencies were related to their lack of attendance. The type of problem most frequently mentioned by this group was the time at which the class was held.



Reasons for Not Coming (15.2% who expected infrequent or no future attendance):

Would come more often if program were changed in some way 3.5%

(Changes suggested were very scattered. Most often mentioned were:

| | |
|---|---|
| Change in class hours | 1.5% |
| Different methods of instruction | 0.7% |
| Different teacher | 0.4% |
| More individual instruction | 0.4%) |

Would not come more often even if program were changed 11.8%

(Reasons of this group for not coming were also very scattered. Most often mentioned were:

| | |
|---|---|
| Completed the program or attending another educational program | 3.5% |
| Job interferes | 3.4% |
| Illness | 3.1% |
| Caring for children | 1.4% |
| Lack of interest | 0.8%) |

In follow-up interviews in February and March of 1973, students were asked how frequently they had actually attended ABE class. A comparison of these answers with the estimates of expected future attendance given a year earlier shows some differences, notably in the "Not at All" responses. It should be remembered, however, that stated actual attendance refers back to all the time the student considered himself to be enrolled in ABE, whereas expected future attendance refers only to the period after the initial interview in February or March 1972.

| | Expected Future Attendance | Stated Actual Attendance |
|---|---|---|
| Every Time | 40% | 37% |
| Most of the Time | 45% | 57% |
| Not Very Often | 7% | 5% |
| Not at All | 8% | 1% |

On the follow-up interview, the 6% who attended infrequently or not at all gave reasons very similar to those offered by the 15% who expected poor future attendance at the time of the initial interview.

C. ACTUAL ATTENDANCE AS REPORTED BY TEACHERS

Teachers were asked to estimate the total number of ABE class sessions students in the sample had attended up through June, 1972 (including previous years' attendance, if known). Since all students in the sample were enrolled in November, 1971, this report generally covered at least the seven month period November - May.

| Total Number of ABE Class Sessions Attended | Percent |
|---|---|
| 0 | 1.6 |
| 1 - 9 | 16.4 |
| 10 - 19 | 16.8 |
| 20 - 29 | 13.0 |
| 30 - 39 | 12.1 |
| 40 - 49 | 9.5 |
| 50 - 69 | 15.0 |
| 70 - 99 | 6.4 |
| 100 - 199 | 6.8 |
| 200 - 983 | 2.4 |
| Mean 46.4 | |
| Median 30.5 | |

Since the mean class session is 2.9 hours (see Section 2.VII.B below), the mean number of hours attended is 2.9 x 46.4 = 134.6.

Teachers also reported the number of class sessions attended by each student each month. A tabulation of these figures shows that attendance falls steadily during the year. In May, for example, fewer than 40% of those enrolled in November attended class even once.

| Month | Percent Attending Stated Number of Times | | | | |
|---|---|---|---|---|---|
| | 0 | 1-4 | 5-9 | 10-14 | 15 or more |
| November 1971 | 14.9 | 23.8 | 44.1 | 8.0 | 9.2 |
| December 1971 | 25.5 | 37.1 | 28.3 | 6.2 | 2.9 |
| January 1972 | 32.0 | 23.1 | 33.5 | 4.9 | 6.5 |
| February 1972 | 40.5 | 16.6 | 32.4 | 5.3 | 5.2 |
| March 1972 | 47.7 | 16.6 | 27.2 | 4.4 | 4.1 |
| April 1972 | 57.3 | 14.0 | 22.2 | 2.8 | 3.7 |
| May 1972 | 62.2 | 13.8 | 18.2 | 2.2 | 3.6 |
| June 1972 | 82.7 | 8.2 | 5.8 | 1.0 | 2.3 |

D. ACTUAL ATTENDANCE AS REPORTED BY STUDENTS

In follow-up interviews, students were asked "During which months did you attend the basic education program at least one time during the month?" Their answers are shown below. Comparisons with teacher reports are also given for November 1971 through June 1972, the only months about which teachers were asked.

| Year | Month | Percent Attending at Least Once | |
|---|---|---|---|
| | | As Reported by Students | As Reported by Teachers |
| 1971 | September | 74.5 | |
| | October | 80.8 | |
| | November | 80.6 | 85.1 |
| | December | 77.1 | 74.5 |
| 1972 | January | 73.8 | 68.0 |
| | February | 72.0 | 59.5 |
| | March | 64.1 | 52.3 |
| | April | 59.6 | 42.7 |
| | May | 53.1 | 37.8 |
| | June | 37.6 | 17.3 |
| | July | 26.6 | |
| | August | 25.4 | |
| | September | 34.6 | |

(Table Continued)

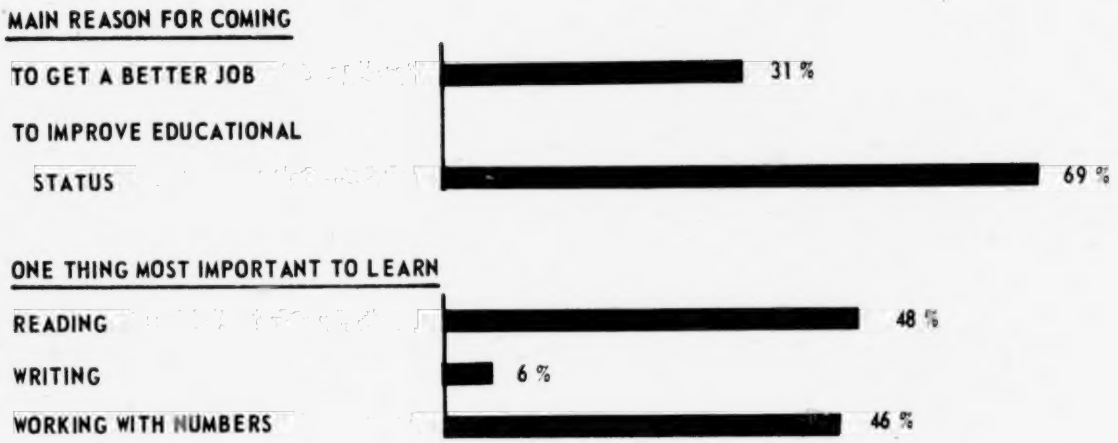
| Year | Month | Percent Attending at Least Once: As Reported by Students | As Reported by Teachers |
|---|---|---|---|
| 1972 | October | 34.9 | |
| | November | 32.8 | |
| | December | 31.5 | |
| 1973 | January | 30.3 | |
| | February | 28.9 | |
| | March | 26.5 | |
| | April | 23.9 | |
| | May | 20.6 | |
| | June | 17.2 | |

Comparison of studer and teacher figures for the first six months of 1972 shows teachers consistently reporting smaller attendance rates than students. This, along with the fact that follow-up interviews could be obtained only from about two-thirds as many students as teachers reported attendance for, suggests that the follow-up interviews represent a group somewhat more stable and/or more interested in ABE than average.

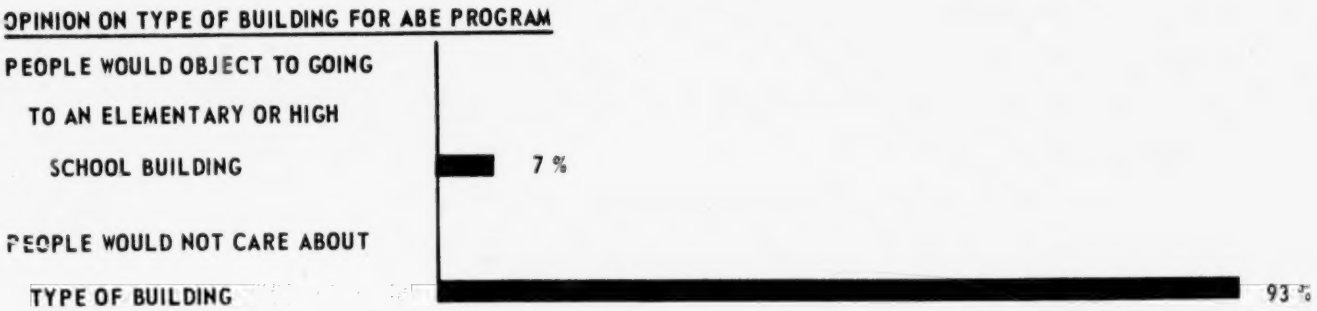
For students who were reached for follow-up interviews, approximately one-third were attending ABE classes one year after the November, 1971 date used to establish this study's enrollment baseline. There had been some drop-off during the summer, down to about 25% attendance during August. Then after a Fall increase, attendance again declined steadily during the year. However, one-fifth of the interviewees stated that they were still attending ABE classes at least once a month in May, 1973.

## E. MOTIVATION

Motivation for coming to ABE,as reported in initial student interviews, tends to be educational rather than job-related. Main interests are in reading and working with numbers, with comparatively small interest in writing as a separate subject for learning.




Only a small percentage of students initially interviewed believe that adults object to attending basic education classes in an elementary or high school building.


OPINION ON TYPE OF BUILDING FOR ABE PROGRAM
PEOPLE WOULD OBJECT TO GOING TO AN ELEMENTARY OR HIGH SCHOOL BUILDING
7 %
PEOPLE WOULD NOT CARE ABOUT TYPE OF BUILDING
93 %

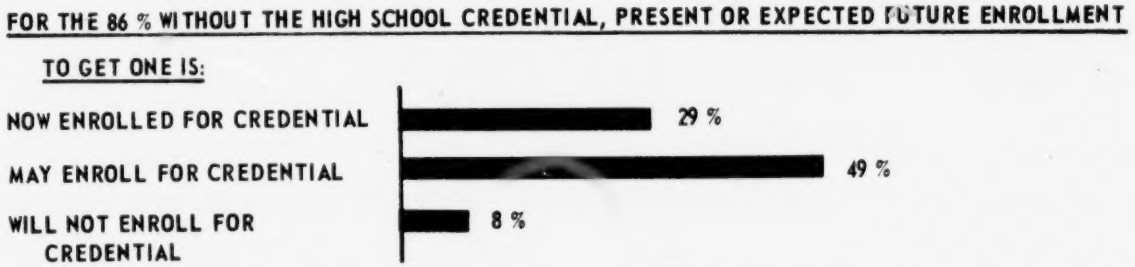
F. WAY FIRST HEARD ABOUT ABE

Most ABE students first heard about the program either from an acquaintance or from the school authorities associated with the program. Comparatively few were referred to ABE by non-school agencies.

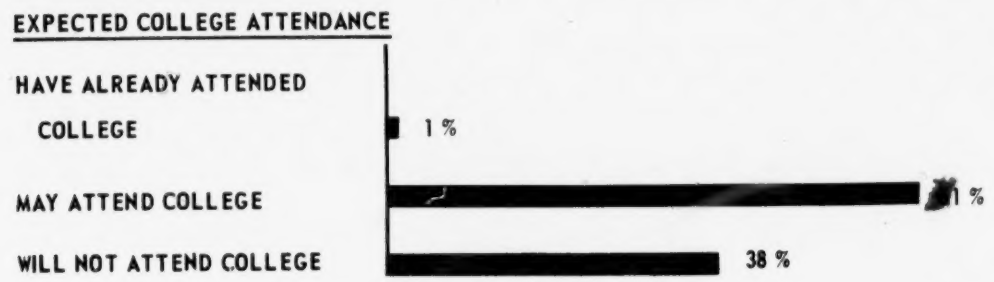
| Way First Heard About ABE Program | Percent* |
|---|---|
| Friend or acquaintance | 28 |
| Teacher, recruiter, or announcement from ABE program or school | 26 |
| Relative | 15 |
| Employment service or agency referral | 13 |
| Newspaper | 11 |
| Student already enrolled | 6 |
| Radio | 4 |
| Employer | 4 |
| Television | 2 |
| Union or Club | 2 |
| Church | 1 |
| Other | 1 |

G. EDUCATIONAL GOALS

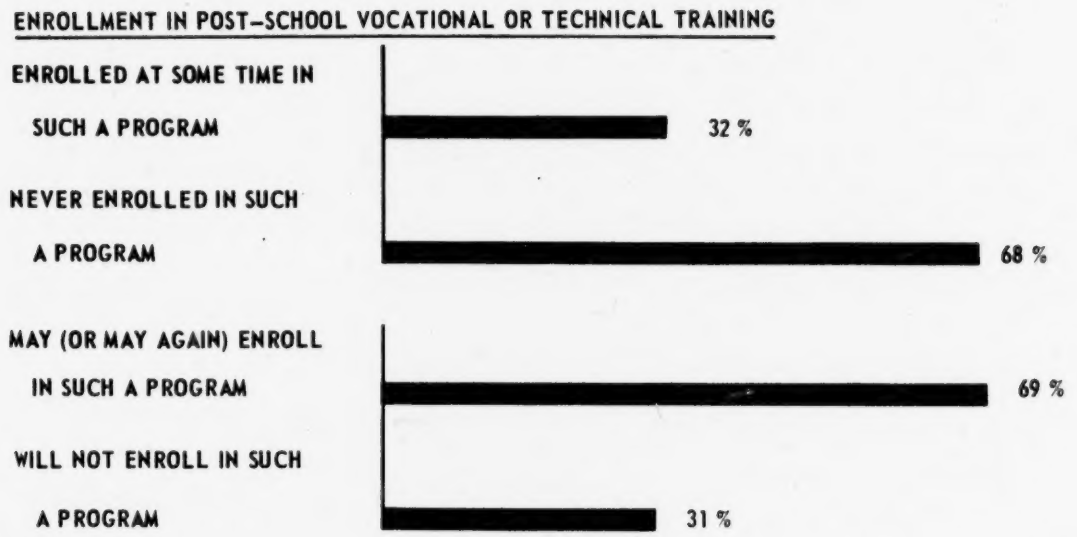
Initial student interviews showed that stated educational goals were high. Only 8% of the sample thought they would never enroll in a program to obtain a high school credential.


FOR THE 86 % WITHOUT THE HIGH SCHOOL CREDENTIAL, PRESENT OR EXPECTED FUTURE ENROLLMENT
TO GET ONE IS:
NOW ENROLLED FOR CREDENTIAL
29 %
MAY ENROLL FOR CREDENTIAL
49 %
WILL NOT ENROLL FOR CREDENTIAL
8 %

Again, on initial student interviews, over 60% thought they might attend college some time; nearly 70% thought they would enroll for additional vocational or technical training.




* Adds to more than 100% since multiple responses were accepted.


ENROLLMENT IN POST-SCHOOL VOCATIONAL OR TECHNICAL TRAINING
ENROLLED AT SOME TIME IN SUCH A PROGRAM
32 %
NEVER ENROLLED IN SUCH A PROGRAM
68 %
MAY (OR MAY AGAIN) ENROLL IN SUCH A PROGRAM
69 %
WILL NOT ENROLL IN SUCH A PROGRAM
31 %

Of the 32% who had ever been enrolled in a post-school vocational or technical training program, the period of enrollment was as follows:

| When Enrolled in Post-School Vocational or Technical Training | Percent* |
|---|---|
| Enrolled now | 14 |
| Enrolled during past year | 7 |
| Enrolled more than a year ago | 14 |

Follow-up interviews showed a rather surprising degree of change in students' stated educational goals. From February - March, 1972, to July - August, 1973, there were marked decreases in the percentages of students who thought they might enroll in high school and college programs. In initial interviews, 60% thought they might attend college some time; in final interviews, only 37% thought they might attend college. However, most students continued to plan on additional vocational or technical training.

| | February-March 1972 | July-August 1973 |
|---|---|---|
| Will enroll (or have already enrolled) for a High School diploma | 93.2% | 80.5% |
| Will attend college sometime (or have already attended) | 60.4% | 36.6% |
| Will get additional vocational or technical training | 69.2% | 65.4% |

* Adds to more than 32% since more than one response could be given.

The foregoing figures show the greatest drop with respect to those who think they might go to college sometime -- from 60% to 37%. This drop may be the result of an increasing realization among ABE enrollees, both current and former, that college is a long, long way off.

## H. HELP TO SCHOOL CHILDREN

Fifty-one percent of initial student interviewees had children of school age (5-18 years). Additionally, 55% of all initial interviewees had helped children with school work during the past year. Follow-up interviews showed a slight increase (to 58%) in the percent of students who had helped school children during the past year.

## IV. EMPLOYMENT AND EARNINGS

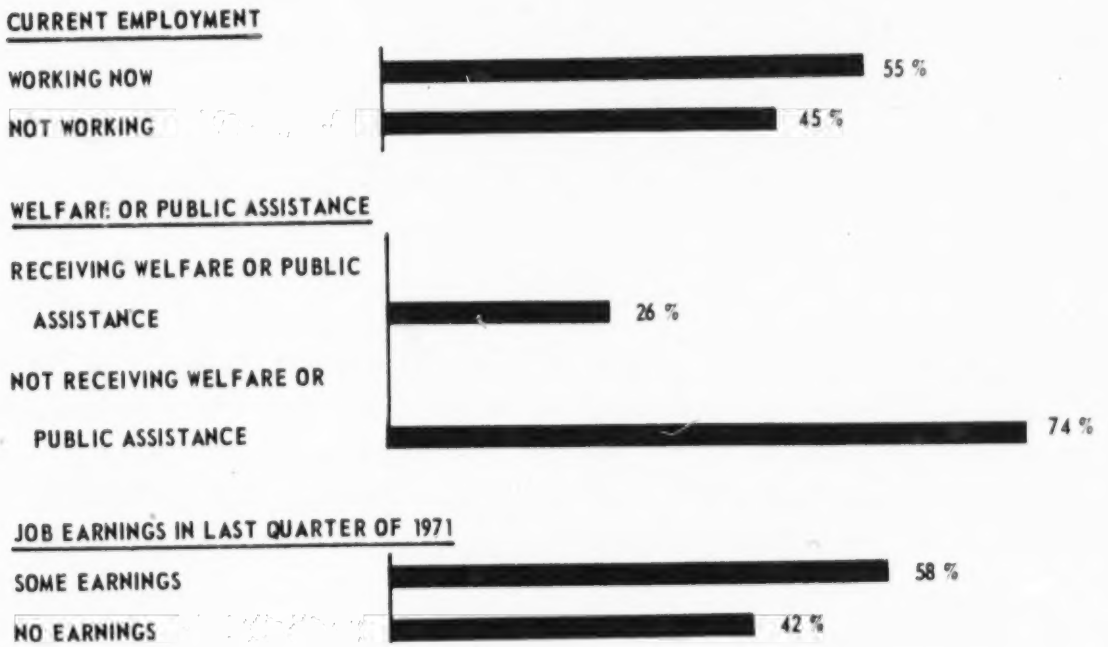
A major objective of this longitudinal study was to obtain information on student employment and earnings over approximately an 18-month period of time. Three interviews were conducted during this period. Since some of the questions used the word "now" (e.g., "Are you working now?") and others referred to periods of time three to nine months previously, Table 2-2 is provided to indicate interrelations among the various times involved.

Table 2-2. Calendar Reference Points for Student Employment and Earnings

| Interview | "Now" | Previous Quarter | Last Half-Year |
|---|---|---|---|
| Initial | February-March, 1972 | October-December, 1971 | June-December, 1971 |
| First Follow-up | February-March, 1973 | October-December, 1972 | June-December, 1972 |
| Second Follow-up | July-August, 1973 | April-June, 1973 | January-June, 1973 |

A. JOB AND WELFARE STATUS

Somewhat over half of the respondents to the initial student interview held jobs during the Fall and Winter of 1971-72. About one-quarter received welfare or public assistance.




Follow-up interviews showed steady gains in employment. Between the initial interviews and the second follow-up interviews, there was a 10 percentage point increase in those working, a 5 point decrease in those on welfare, and a 12 point increase in those with some job earnings during the previous quarter. Complete figures are as follows:

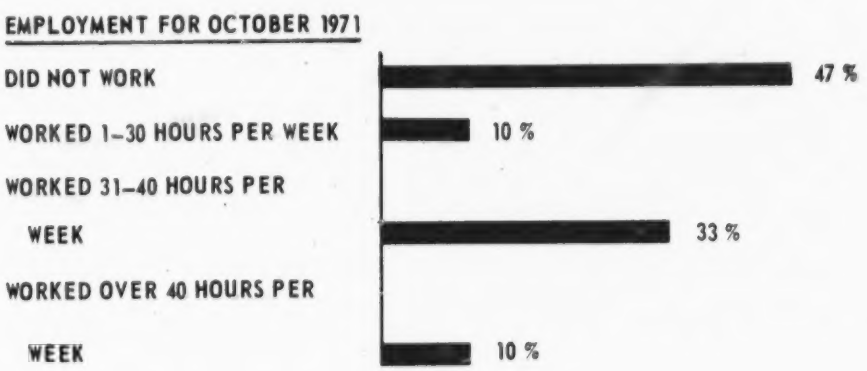
| | February-March, 1972 | February-March, 1973 | July-August, 1973 |
|---|---|---|---|
| Working Now | 54.6% | 63.0% | 64.6% |
| On Welfare | 26.1% | 23.6% | 21.5% |
| Some Job Earnings Previous Quarter | 57.8% | 65.9% | 70.1% |

As a sidelight to employment status, the number of those who worked more than 25 miles away from the interview location (usually either the ABE class site or the student's home) steadily increased:

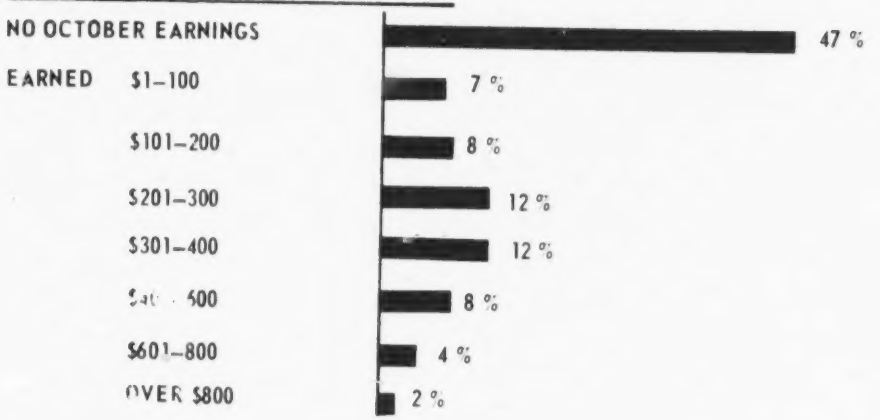
| | October-December, 1971 | October-December, 1972 | April-June, 1973 |
|---|---|---|---|
| Percentage Who Worked More Than 25 Miles Away During Preceding Quarter | 4.6% | 7.7% | 9.9% |

B. HOURS OF WORK AND EARNINGS, FALL, 1971

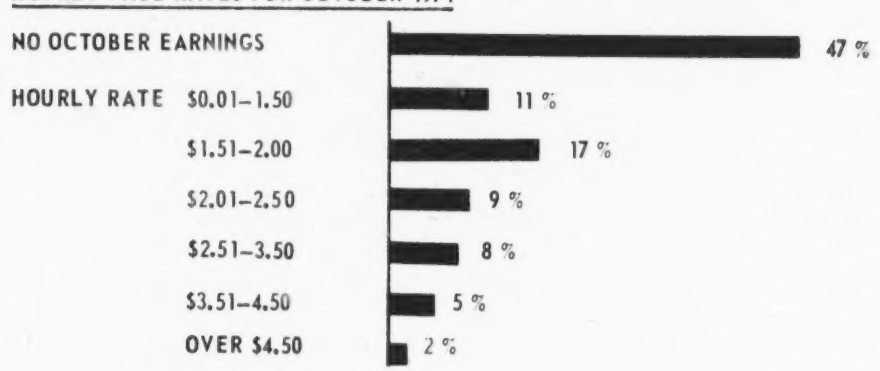
For those who worked during October, 1971, median earnings were $300 per month and $2.00 per hour; mean earnings were $340 per month and $2.29 per hour. Earnings were spread over a wide range, and over 10% of those who worked earned more than $600 per month. The charts below show hours of employment, total earnings, and hourly wage rates reported for October. Information was also obtained for November and December, but reveals very few differences from the October data.



TOTAL JOB EARNINGS FOR OCTOBER 1971




HOURLY WAGE RATES FOR OCTOBER 1971




For those who worked during the period October-December, 1971, mean hours of work and earnings were as follows, on a month-to-month basis:

| | October 1971 | November 1971 | December 1971 | Average |
|---|---|---|---|---|
| Mean Hours Per Week | 37.9 | 37.7 | 37.5 | 37.7 |
| Mean Monthly Earnings | $340 | $335 | $334 | $336 |
| Mean Hourly Pay Rate | $2.29 | $2.27 | $2.27 | $2.28 |

Total earnings for the same three months taken together averaged $312 per month for those who worked at any time during the quarter. This figure is lower than the monthly average of $336 tabulated above, since it includes earnings of zero in some months for those who worked during only one or two months out of the three. Average monthly earnings computed on the basis of this total show the following breakdown for race and sex:

| Group | Total Oct-Dec, 1971 Mean Monthly Earnings | Earnings as Percentage of All Groups Together |
|---|---|---|
| All Groups Together | $312 | 100% |
| White | $335 | 107% |
| Black | $284 | 91% |
| Other | $332 | 106% |
| Male | $397 | 127% |
| Female | $229 | 73% |

C. CHANGES IN HOURS OF WORK AND EARNINGS, 1971-1973

Follow-up interviews showed significant gains in earnings and hourly pay for those who worked. There are several ways in which this appears in the data collected:

| | October-December, 1971 | October-December, 1972 | April-June, 1973 |
|---|---|---|---|
| Mean of Monthly Earnings (if any) | $336 | $378 | $407 |
| Median of Monthly Earnings (if any) | $297 | $341 | $360 |
| Mean of Monthly Earnings Based on Quarterly Total (if any earnings in one or more months) | $312 | $360 | Not Computed |
| Mean of Hourly Earnings (if any) | $2.28 | $2.52 | $2.63 |
| Median of Hourly Earnings (if any) | $2.00 | $2.22 | $2.36 |
| Mean Hours Worked Per Week (if any) | 37.7 | 38.3 | 39.1 |
| Monthly Earnings Computed from Mean Hours Per Week Times Hourly Earnings Times 4.33 | $372 | $418 | $446 |

The figures tabulated above indicate the following rates of gain, by month:

| | 12-Month Gain, 1971-72 | Monthly Rate of Gain, 1971-72 | 18-Month Gain, 1971-73 | Monthly Rate of Gain, 1971-73 |
|---|---|---|---|---|
| Mean of Monthly Earnings (if any) | $42 | $3.50 | $71 | $3.94 |
| Median of Monthly Earnings (if any) | $44 | $3.67 | $63 | $3.50 |
| Mean of Monthly Earnings Based on Quarterly Total | $48 | $4.00 | -- | -- |
| Monthly Earnings Computed from Hours Per Week and Hourly Rate | $46 | $3.83 | $74 | $4.11 |

The gains in mean monthly earnings of $42 (for a 12-month interval) and $71 (for 18 months) are equivalent to percentage gains of 12.5% and 21.1% over the initial mean of $336. Percentage gains in median monthly earnings for the same two periods are 14.8% and 21.2%, based on the initial median of $297.

The above figures result from looking at each stated period of time separately from the others. A different but consistent view of wage changes is obtained by comparing the earnings of individual ABE students from one time period to another. For example, if the earnings of each enrollee for October-December, 1971 are subtracted from the same enrollee's earnings for October-December, 1972, a mean gain per enrollee of $45 a month results. Individual changes in earnings reported for this period varied from a loss of $1633 per month to a gain of $700 per month. Approximately 30% of the enrollees showed a decline in monthly earnings, 4% showed no change, and 66% showed an increase. Percentages with various losses and gains per month for this period were:

| Change in Monthly Earnings from October-December, 1971 to October-December, 1972 | Percent | Cumulative Percent |
|---|---|---|
| -$1633 to -$150 | 8.6 | 8.6 |
| -$149 to -$50 | 10.4 | 19.0 |
| -$49 to -$1 | 10.7 | 29.7 |
| 0 | 3.6 | 33.3 |
| $1 to $24 | 11.9 | 45.2 |
| $25 to $49 | 10.1 | 55.3 |
| $50 to $74 | 10.5 | 65.8 |
| $75 to $99 | 5.1 | 70.9 |
| $100 to $149 | 9.5 | 80.4 |
| $150 to $199 | 6.1 | 86.5 |
| $200 to $299 | 5.7 | 92.2 |
| $300 to $700 | 7.8 | 100.0 |

Mean Gain: $48.32

Median Gain: $33.67

These same one-year gains show the following breakdown by race and sex:

| Group | Mean Gain in Monthly Earnings October-December, 1971 to October-December, 1972 | Gain as Percentage of All Groups Together |
|---|---|---|
| All Groups Together | $48 | 100% |
| White | $49 | 102% |
| Black | $49 | 102% |
| Other | $36 | 75% |
| Male | $54 | 112% |
| Female | $43 | 90% |

In analyzing the gains indicated by the foregoing figures, several considerations suggest that the gains are real rather than a product of selective reinterviewing, increases in hours of work, or inflation. First, the $48 per month mean increase in earnings derived by looking at individual gains and losses over a one year period is the same figure as the $48 per month mean increase derived by subtracting the mean of all earnings in October-December, 1971 from the mean of all earnings in October-December, 1972. Since 1971 earnings were based on a larger response rate than 1972 earnings, any consistent difference between the two groups of interviewees should have shown up as a difference in mean increase determined by these two methods. Since there was no difference in increase, it may well be that the $48 per month is representative of the larger group originally interviewed as well as of the smaller group reinterviewed.

Second, hours of work per week increased very little -- from 37.7 to 38.3, or 1.6%, during the 1971-72 period under consideration. This is proportionally much less than the $48 per month increase during the same period, which represents a 15.4% improvement over the $312 per month monthly mean for 1971.

Third, inflation and other causes of wage fluctuations probably account for only 5 or 6 percent of these increases in earnings. Figures for the U. S. as a whole, comparing gross average weekly earnings for the last quarter of 1971 with those for the last quarter of 1972, show increases of 5.2% for wholesale and retail trade and services, and 5.7% for production or nonsupervisory workers on private nonagricultural payrolls. These industries probably cover a large proportion of ABE students.

In November, 1971, there were approximately 280,000 ABE students in the United States similar to those from whom data were collected during this study. Total increases in the earnings of these 280,000 ABE students between the end of 1971 and the end of 1972 may be estimated by extrapolating from the sample studied to the entire group of students, as follows:

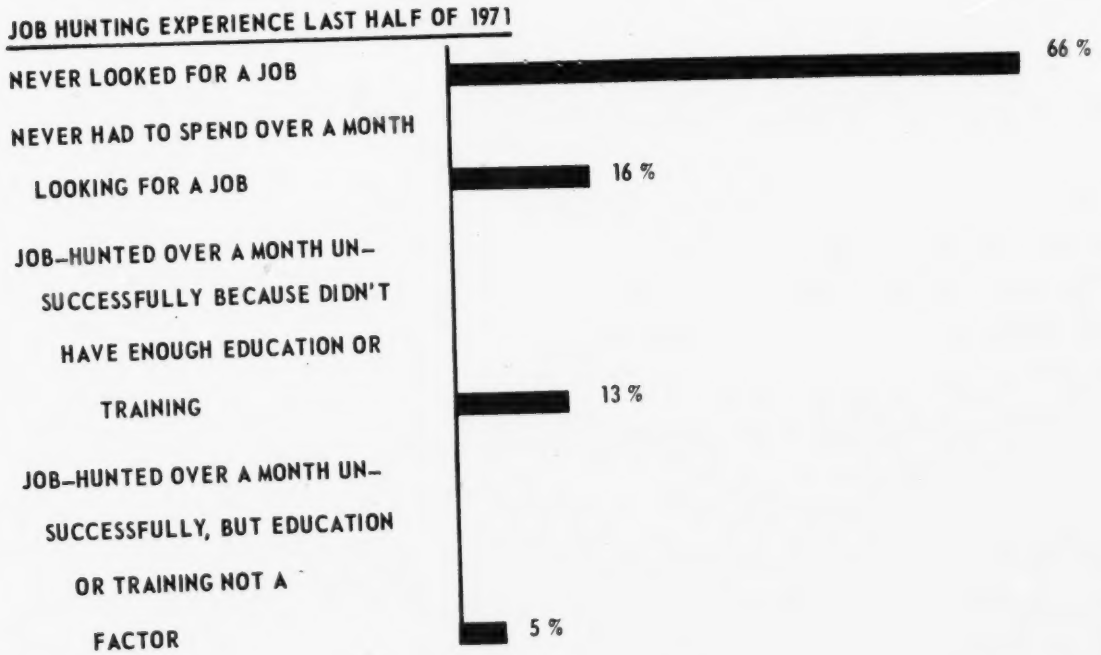
- 57% of the 280,000, or 160,000, would have had some job earnings in the last quarter of 1971.

- At $48 per month increase by the end of the next twelve months, the average increase would have been $24 per month or $288.
- Total increase for the 160,000 students with earnings would have been approximately $46,000,000.

Although this figure of $46,000,000 should probably be discounted somewhat for various reasons, there seems no doubt that ABE students made substantial gains in earnings in the period under study.

D. JOB HUNTING EXPERIENCE

Most respondents to initial student interviews indicated no serious problems in finding or holding jobs between July and December, 1971. However, nearly one-fifth had recently looked for jobs for over a month without success. Most of these attributed their difficulties to a lack of education or training.


JOB HUNTING EXPERIENCE LAST HALF OF 1971
NEVER LOOKED FOR A JOB
66 %
NEVER HAD TO SPEND OVER A MONTH LOOKING FOR A JOB
16 %
JOB-HUNTED OVER A MONTH UN-SUCCESSFULLY BECAUSE DIDN'T HAVE ENOUGH EDUCATION OR TRAINING
13 %
JOB-HUNTED OVER A MONTH UN-SUCCESSFULLY, BUT EDUCATION OR TRAINING NOT A FACTOR
5 %

| Looked for a Job Last Half of 1971 | Percent |
|---|---|
| No | 66.3 |
| Yes, but did not have to look more than a month | 16.3 |
| Yes, and had to look more than a month | 17.3 |

| Reasons Given by the 17.3% Who Looked More than a Month | Percent* |
|---|---|
| Not enough education or training | 12.6 |
| Jobs are scarce | 7.3 |
| Age | 1.8 |
| Lack of experience | 1.3 |
| Did not like available jobs | 1.2 |
| Miscellaneous other @ less than 1% | 9.1 |

Comparison of the above responses with those obtained in follow-up interviews shows a small decrease in the percentage of those who job-hunted unsuccessfully for over a month:

| | July-December, 1971 | July-December, 1972 | January-June, 1973 |
|---|---|---|---|
| Never Looked for a Job | 66% | 64% | 72% |
| Job-Hunted Unsuccessfully Over a Month | 17% | 15% | 13% |

For the last half of 1972, only 8% of respondents thought they had trouble finding a job because they did not have enough education or training, as opposed to 12% with this opinion a year earlier.

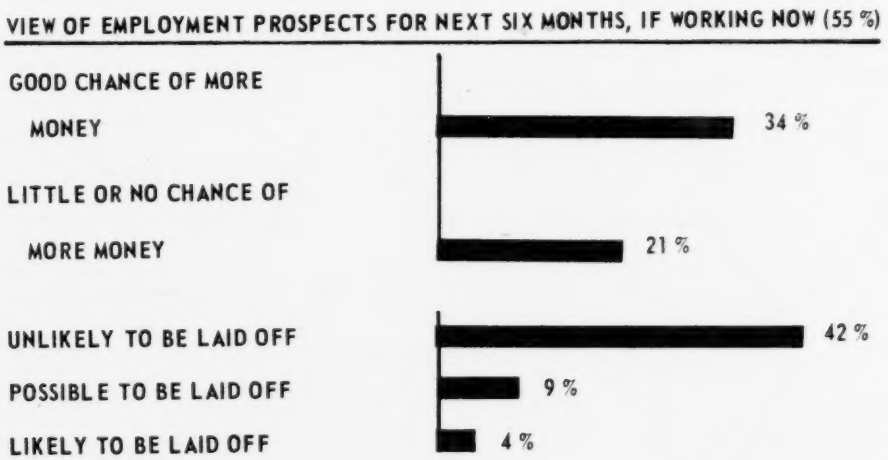
---

* Adds to more than 17.3% because multiple responses were sought.

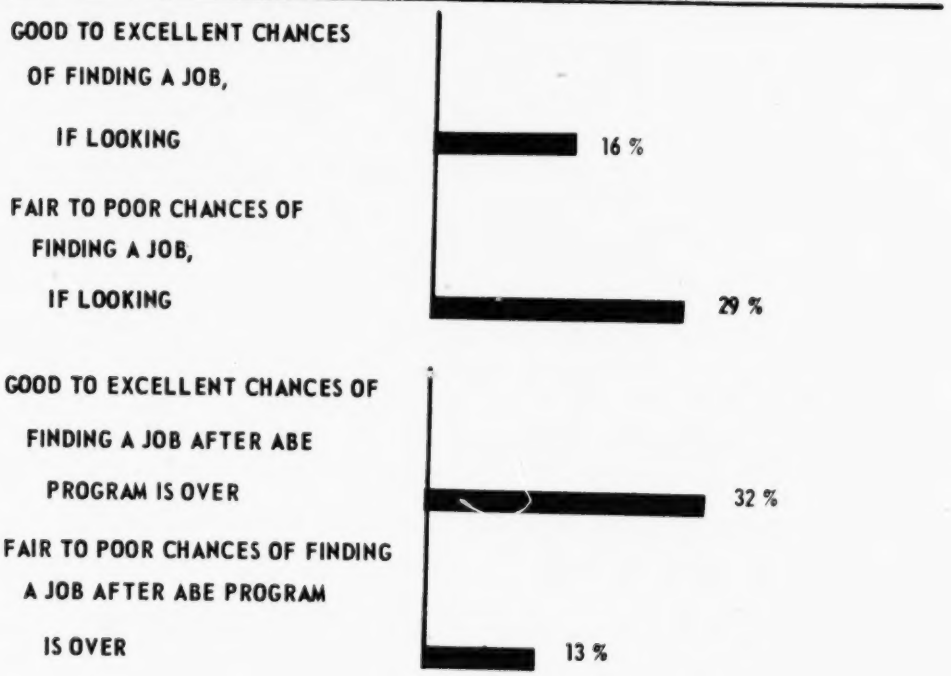
E. VIEW OF EMPLOYMENT PROSPECTS

ABE enrollees were asked in both the initial interview and the first follow-up interview about their prospects for continuing employment (if working) or new employment (if not working). Responses at the time of the initial interview were on the whole optimistic. Most of those with jobs thought they had a good chance of earning more money during the next six months, and most thought it unlikely that they would be laid off within the same six month period. For those who were not working, although few felt their present chances of finding a job were good, most believed that after they had finished the ABE program they would have good to excellent chances of finding a job.

The bar graphs below present responses to initial student interviews:


VIEW OF EMPLOYMENT PROSPECTS FOR NEXT SIX MONTHS, IF WORKING NOW (55 %)
GOOD CHANCE OF MORE MONEY
34 %
LITTLE OR NO CHANCE OF MORE MONEY
21 %
UNLIKELY TO BE LAID OFF
42 %
POSSIBLE TO BE LAID OFF
9 %
LIKELY TO BE LAID OFF
4 %

**VIEW OF EMPLOYMENT PROSPECTS FOR NEXT SIX MONTHS, IF NOT WORKING NOW (45 %)**


GOOD TO EXCELLENT CHANCES OF FINDING A JOB, IF LOOKING
16 %
FAIR TO POOR CHANCES OF FINDING A JOB, IF LOOKING
29 %
GOOD TO EXCELLENT CHANCES OF FINDING A JOB AFTER ABE PROGRAM IS OVER
32 %
FAIR TO POOR CHANCES OF FINDING A JOB AFTER ABE PROGRAM IS OVER
13 %

A comparison of these results with those from the first follow-up interview shows similar degrees of optimism during both periods of time:

| | February-March, 1972 | February-March, 1973 |
|---|---|---|
| Percent Working Now | 55% | 63% |
| If Working Now: | | |
| • Good Chance of Earning More Money in Next 6 Months | 34% | 40% |
| • Little or No Chance of More Money | 21% | 23% |
| • Unlikely to be Laid Off | 42% | 49% |
| • Possible or Likely to be Laid Off | 13% | 14% |
| Percent Not Working Now | 45% | 37% |
| If Not Working Now: | | |
| • Good to Excellent Chances of Finding a Job in Next 6 Months, if Looking | 16% | 15% |
| • Fair to Poor Chances | 29% | 22% |

F. PREVIOUS MILITARY SERVICE

Initial interviews showed that less than 10% of all respondents had military service -- in most cases, 2 years or less.

| Former Military Service | Percent |
|---|---|
| Yes | 8.5 |
| No | 91.5 |

For the 8.5%, the lengths and periods of services were:

| | |
|---|---|
| 2 years or less | 4.8% |
| 3 - 10 years | 3.7% |
| Last year of service after 1969 | 2.1% |
| Between 1962 and 1969 | 3.1% |
| Before 1962 | 3.3% |

G. RELATIONSHIP OF WELFARE STATUS TO PREVIOUS SCHOOLING

As the tabulation below indicates, there is a small positive relationship between possession of a high school credential and receiving welfare or public assistance. Whereas 19% of those receiving welfare or public assistance have a high school credential, only 14% of those not receiving welfare or public assistance have a high school credential. Statistically, this relationship is highly significant (probability less than .001 of occurring by chance). No data were obtained during the study which explained this correlation.

The tabulation also gives figures relating welfare status to previous attitude to school. In this case, the relationships are not statistically significant.

| Welfare or Public Assistance by Previous Attitude to School | Percent of Total | Percent of Subtotal |
|---|---|---|
| Receiving Welfare or Public Assistance | | |
| Obtained H.S. credential | 5% | 19% |
| Left school but wanted to continue | 15% | 58% |
| Left school but did not want to continue | 6% | 23% |
| Subtotal | 26% | 100% |
| Not Receiving Welfare or Public Assistance | | |
| Obtained H.S. credential | 10% | 14% |
| Left school but wanted to continue | 44% | 59% |
| Left school but did not want to continue | 20% | 27% |
| Subtotal | 74% | 100% |
| TOTAL | 100% | -- |

H. RELATIONSHIP OF ABE TO EMPLOYMENT

In follow-up interviews, respondents were asked whether their jobs were the same as those they had when they began the basic education program. A little more than half of those working had the same jobs they previously held.

| | February-March, 1973 | July-August, 1973 |
|---|---|---|
| Working Now | 63% | 65% |
| Present job is the same as when began ABE | 32% | 36% |
| Present job is not the same | 24% | 25% |
| Was unemployed when began ABE | 7% | 4% |

Respondents with new jobs were asked whether they preferred the new work to the old. A substantial majority (79%) did in fact prefer the new jobs.

The question, "How much do you feel your experience with the basic education program helped you in your present job?" was asked in the two follow-up interviews. Of those working, most believed that ABE had helped some or very much. Detailed answers were:

| | February-March, 1973 | July-August, 1973 |
|---|---|---|
| Percentage of those working who felt they were helped by ABE in their present jobs: | | |
| • Very much | 34% | 36% |
| • Some | 27% | 24% |
| • A little | 14% | 15% |
| • Not at all | 25% | 25% |

To the question asked in February-March 1973, "Did anyone connected with the basic education program ever help you to find a job?" about 10% answered "Yes," 90% answered "No."

Finally, respondents who worked were asked in February-March, 1973 whether they had received a pay increase since October 1971, and how much they thought ABE had helped in getting the increase. Nearly two-thirds had received increases, and nearly half of those with increases felt that ABE had helped at least a little in getting the increase. Detailed figures are:

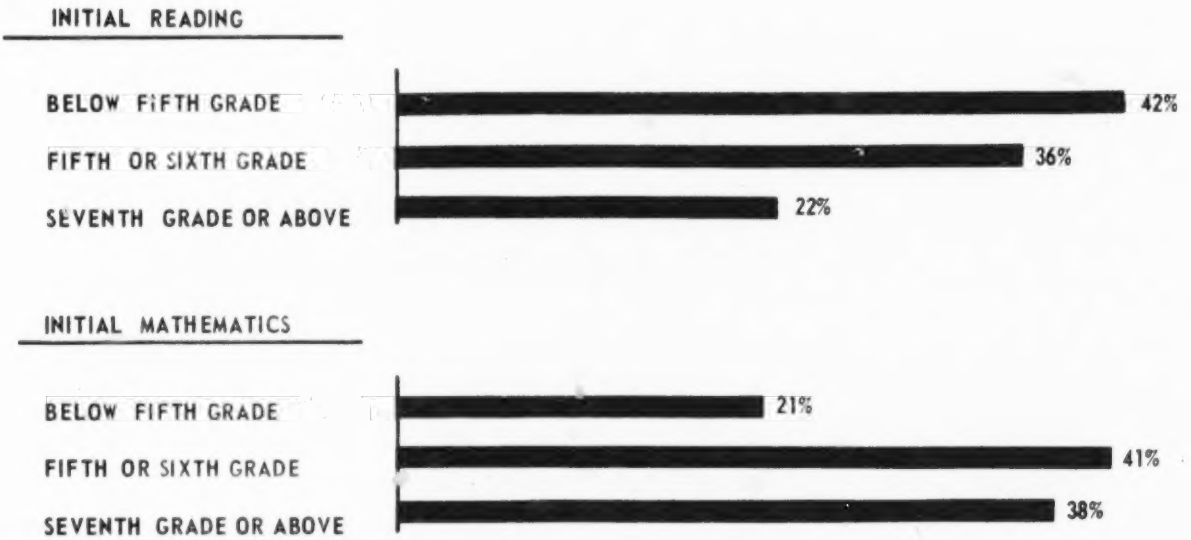
| | |
|---|---|
| Percent of those working in February-March, 1973 who had received a pay increase since October 1971 | 66% |
| Percent of those with an increase who felt the ABE program had helped in getting the increase: | |
| • Very much | 15% |
| • Some | 20% |
| • A little | 12% |
| • Not at all | 52% |

## V. ACHIEVEMENT TEST DATA

ABE students were given reading and mathematics tests at two separate times during the 1971-72 school year. The tests used, which were selected from the Tests of Adult Basic Education (TABE), were initially administered in early 1972; comparable forms were later re-administered to as many of the same students as possible. Attendance data were collected on which to base estimates of hours of instruction between tests. The calendar interval between tests was usually four or five months.

### A. INITIAL TESTS

Almost all of the initial tests were given in January and February of 1972. At that time, students had been enrolled in ABE at least since November, 1971 -- some, much longer. Results of these tests showed, on the average, a reading achievement at about the middle of the fifth grade (5.4) and a mathematics achievement at about the middle of the sixth grade (6.4).



| Initial Grade Levels | Reading | Mathematics |
|---|---|---|
| Below 3rd grade | 12.1% | 1.5% |
| Below 4th grade | 27.0% | 10.9% |
| Below 5th grade | 42.1% | 20.6% |
| Below 6th grade | 59.9% | 38.9% |
| Below 7th grade | 78.3% | 61.8% |
| Below 8th grade | 92.6% | 81.2% |
| Eighth grade or above | 7.4% | 18.8% |
| Median | Grade 5.4 | Grade 6.5 |
| Mean | Grade 5.4 | Grade 6.4 |
| Standard Deviation | 1.8 grades | 1.7 grades |
| Range | Grades 2.0-9.5 | Grades 2.2-9.7 |
| 10-90 Range | Grades 2.7-7.6 | Grades 3.8-8.6 |
| 25-75 Range | Grades 3.8-6.8 | Grades 5.1-7.5 |

B. GAINS BETWEEN TESTS

Students were retested after a period of approximately four months. The average gain in reading was half a grade; in mathematics, three-tenths of a grade.

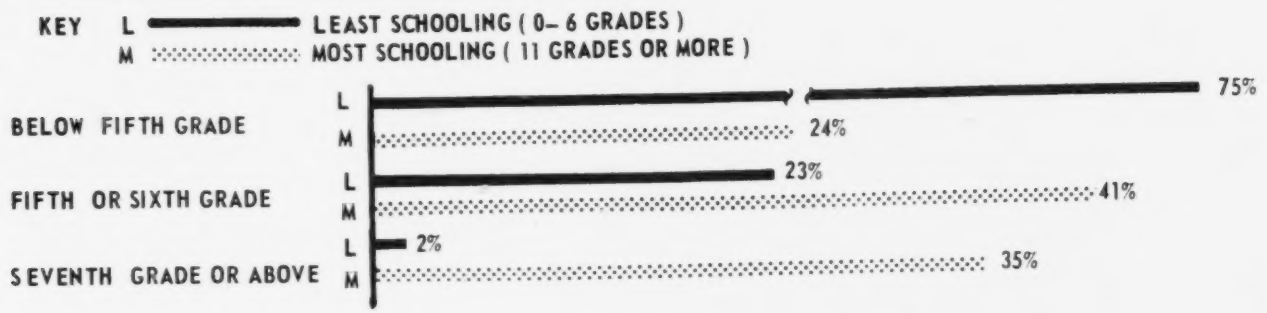
| Gains Between Tests | Reading | Mathematics |
|---|---|---|
| Gained two grades or more | 6.8% | 3.6% |
| Gained one grade or more | 25.6% | 19.5% |
| Gained one-half grade or more | 47.8% | 40.8% |
| Some gain, but less than one-half grade | 18.9% | 24.5% |
| Zero or negative gain | 33.3% | 34.7% |
| Median gain | 0.4 grades | 0.3 grades |
| Mean gain | 0.5 grades | 0.3 grades |
| Standard Deviation | 1.1 grades | 1.0 grades |
| Range | -4.8 to 6.6 | -5.3 to 6.9 |
| 10-90 Range | -0.6 to 1.6 | -0.6 to 1.2 |
| 25-75 Range | -0.2 to 0.9 | -0.1 to 0.8 |

C. INITIAL TEST RESULTS AND PREVIOUS SCHOOLING

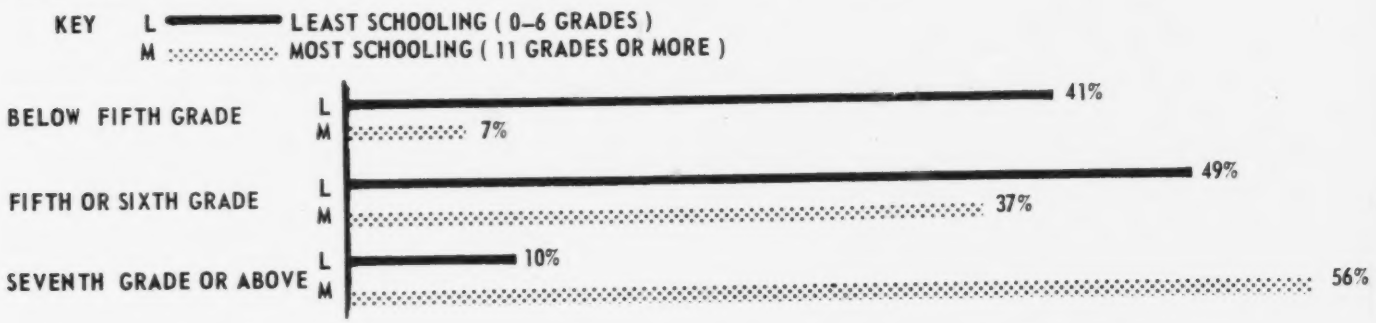
Grade levels achieved on tests are somewhat related to amount of previous schooling. For example, 98% of students who had completed less than seven grades of school also had reading test scores below the seventh grade level. Proportionately fewer of the students who had completed more years of school were as low in reading scores. However, 65% of the students with three or more years of high school had reading scores below the seventh grade level; 44% of this same group had mathematics scores below the seventh grade.

The charts below show test scores for two out of four "previous schooling" subsamples -- those with least schooling (less than seven grades) and those with most schooling (11 grades or more). In these charts (and in all charts of this type throughout this discussion of test data) percentages for each subsample add to 100, and each entry for a subsample indicates the percentage of the subsample achieving at the indicated grade level. For example, the first line of the chart immediately following means, "75% of the group with less than seven years of schooling scores below the fifth grade level on the initial reading tests."

READING SCORES, BY LENGTH OF PREVIOUS SCHOOLING




MATHEMATICS SCORES, BY LENGTH OF PREVIOUS SCHOOLING




The table below presents figures for all four of the "previous schooling" subsamples.

Grade Levels on Initial Tests

| Last Grade of School Completed | Reading | | | Mathematics | | |
|---|---|---|---|---|---|---|
| | 2.0-4.9 | 5.0-6.9 | 7.0-9.5 | 2.2-4.9 | 5.0-6.9 | 7.0-9.7 |
| 0-6 | 75% | 23% | 2% | 41% | 49% | 10% |
| 7-8 | 43% | 39% | 18% | 20% | 45% | 35% |
| 9-10 | 27% | 44% | 29% | 13% | 37% | 50% |
| 11 and over | 24% | 41% | 35% | 7% | 37% | 56% |

The next table expands the information above and shows details on a year-by-year basis for last grade of school completed:

| Last Grade of School Completed | Grade Levels on Initial Tests: Reading 2.0-4.9 | Reading 5.0-6.9 | Reading 7.0-9.5 | Mathematics 2.2-4.9 | Mathematics 5.0-6.9 | Mathematics 7.0-9.7 |
|---|---|---|---|---|---|---|
| 1 or less | 84% | 8% | 8% | 62% | 23% | 15% |
| 2 | 92% | 8% | 0% | 58% | 34% | 8% |
| 3 | 84% | 16% | 0% | 56% | 44% | 0% |
| 4 | 87% | 13% | 0% | 36% | 61% | 3% |
| 5 | 78% | 22% | 0% | 41% | 54% | 5% |
| 6 | 60% | 36% | 4% | 32% | 49% | 19% |
| 7 | 57% | 37% | 6% | 31% | 51% | 18% |
| 8 | 34% | 40% | 26% | 13% | 41% | 46% |
| 9 | 31% | 41% | 28% | 14% | 38% | 48% |
| 10 | 23% | 46% | 31% | 12% | 36% | 52% |
| 11 | 17% | 45% | 38% | 6% | 31% | 63% |
| 12 or more | 29% | 39% | 32% | 7% | 41% | 52% |

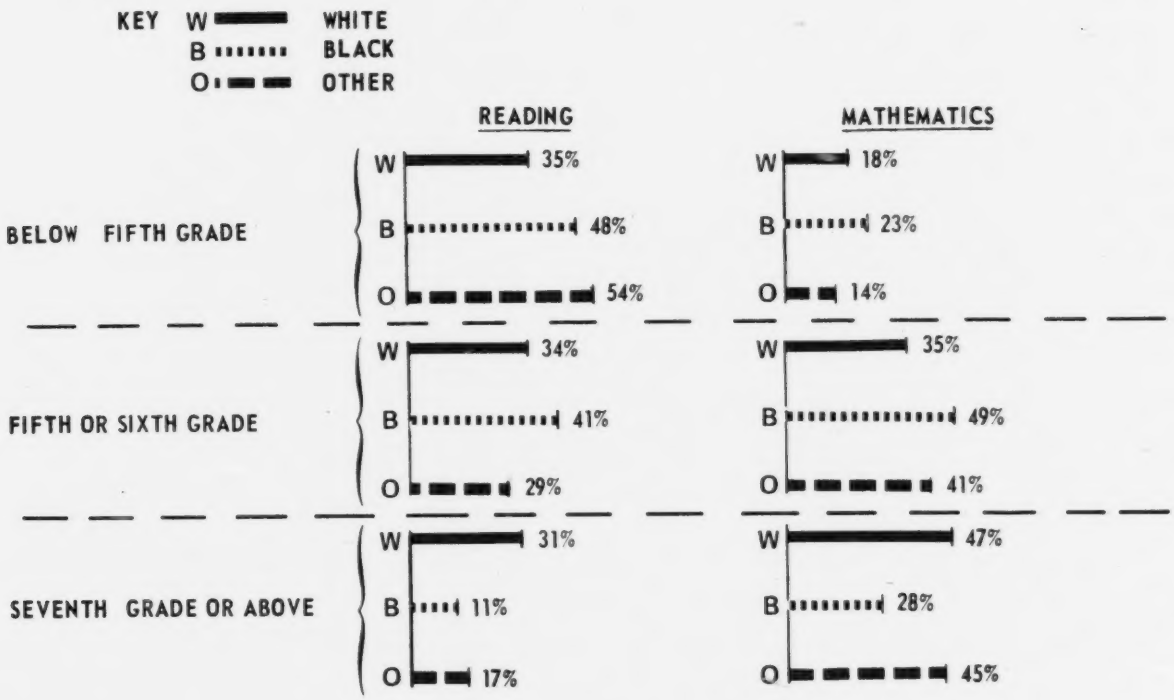
ABE students who already have obtained high school diplomas or certificates scored higher, on the whole, than students who dropped out before completing high school. Of the drop-outs, those who said that when they left school they did not want to continue, scored generally higher than those who wanted to continue.

| Previous Attitude Toward School | Grade Levels on Initial Tests: Reading 2.0-4.9 | Reading 5.0-6.9 | Reading 7.0-9.5 | Mathematics 2.2-4.9 | Mathematics 5.0-6.9 | Mathematics 7.0-9.7 |
|---|---|---|---|---|---|---|
| Obtained High School Credential | 24% | 39% | 37% | 7% | 37% | 56% |
| Left School but Wanted to Continue | 47% | 37% | 16% | 22% | 44% | 34% |
| Left School and Did Not Want to Continue | 36% | 39% | 25% | 20% | 38% | 42% |

D. INITIAL TEST RESULTS AND DEMOGRAPHIC CHARACTERISTICS

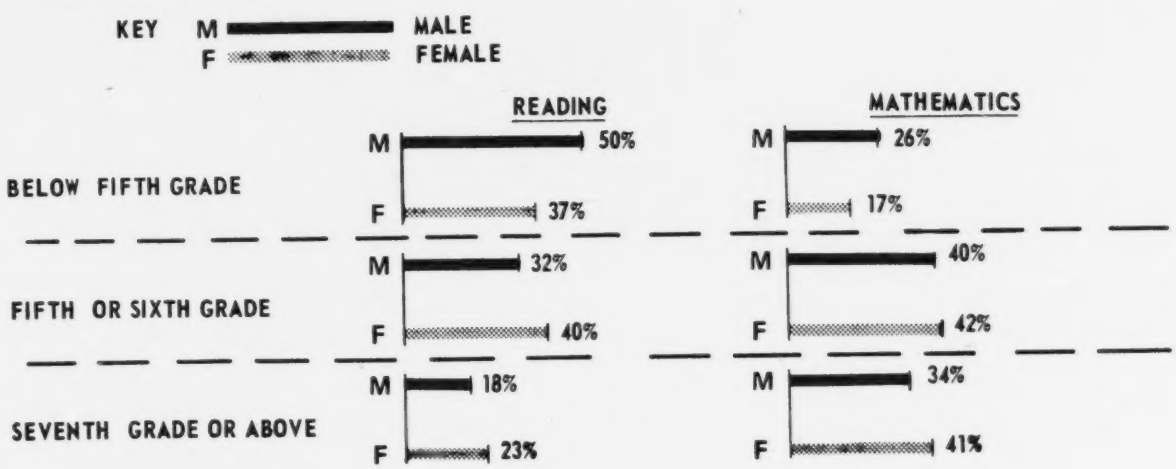
Race. Whites scored proportionately better than blacks or others on the initial tests. The differences were greater on the reading tests than they were on the mathematics tests.

**TEST SCORES, BY RACE**



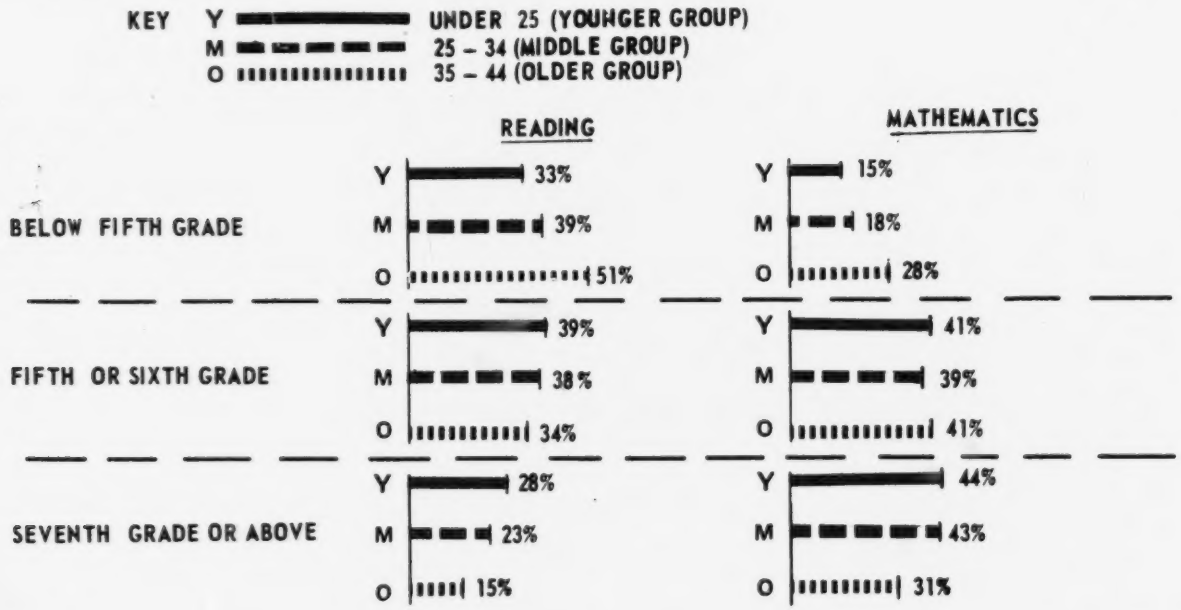

Sex. Females scored proportionately somewhat better than males on the initial tests. Reading differences were slightly greater than mathematics differences.

**TEST SCORES, BY SEX**



Age. Students under 25 did better, on the whole, than older students (25-44). (Students aged 45 and above were excluded from the scope of this study.)

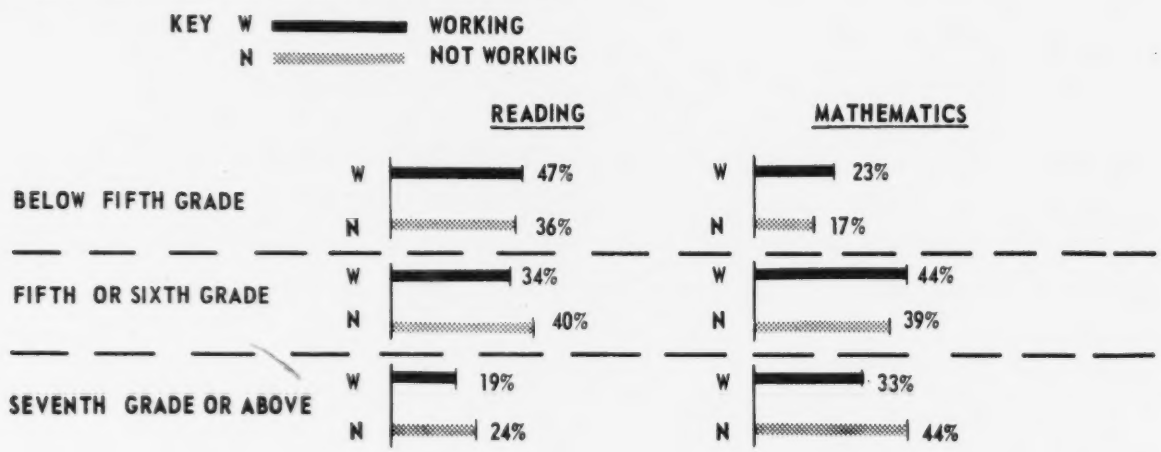
**TEST SCORES, BY AGE**




E. INITIAL TEST RESULTS AND EMPLOYMENT AND WELFARE STATUS

Current Employment Status. ABE enrollees who were working scored somewhat lower than those who were not working.

**INITIAL TEST SCORES, BY CURRENT EMPLOYMENT**



Welfare Status. There was no significant relationship between welfare status and initial test scores. Those who received welfare or public assistance scored approximately the same as those who did not.

F. INITIAL TEST RESULTS AND GAINS BETWEEN TESTS

The students with the lowest initial scores tended to gain the most between tests. A small part of this effect is probably related to the fact that the highest levels possible on the tests given were grades 9.5 for reading and 9.7 for mathematics. However, only small numbers of students actually made scores above grade 9.0 on any of the tests. The percentages who did so were:

| Test | % Above Grade 9.0 |
|---|---|
| Initial Reading | 1.4% |
| Second Reading | 2.0% |
| Initial Mathematics | 5.5% |
| Second Mathematics | 4.6% |

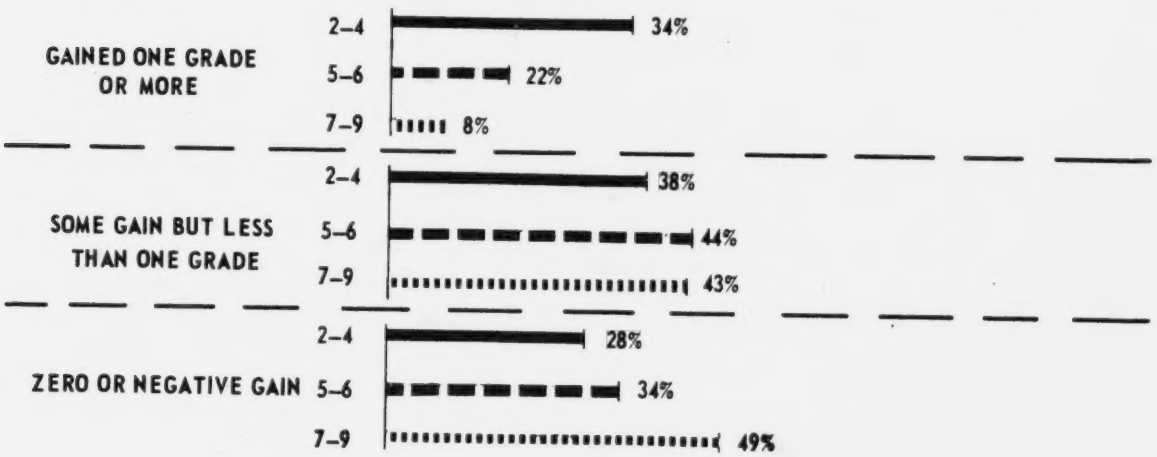
Average gains, by initial test levels, were:

| Initial Reading Level | Average Reading Gain |
|---|---|
| Below Fifth Grade | 0.8 |
| Fifth or Sixth Grade | 0.3 |
| Seventh Grade or Above | 0.0 |

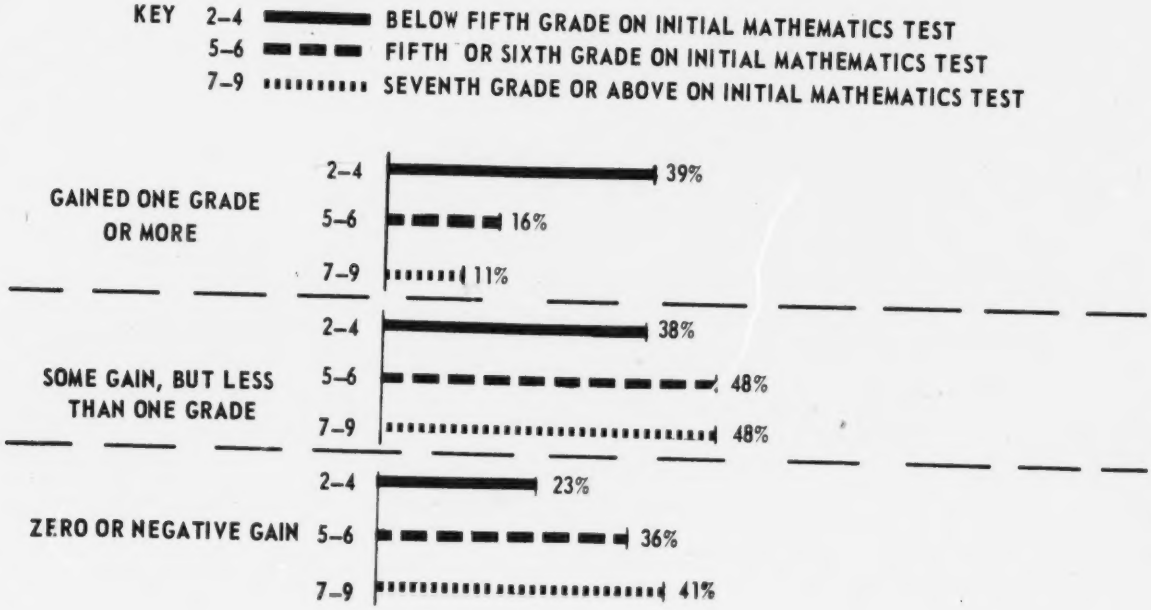
| Initial Mathematics Level | Average Mathematics Gain |
|---|---|
| Below Fifth Grade | 0.8 |
| Fifth or Sixth Grade | 0.3 |
| Seventh Grade or Above | 0.1 |

The charts below show, by initial grade levels, the percentages that gained various amounts. For example, reading scores show that 34% of those who initially scored below the fifth grade gained one grade or more, whereas only 8% of those who initially scored at the seventh grade or above gained one grade or more.

## READING GAINS, BY INITIAL READING LEVEL




## MATHEMATICS GAINS, BY INITIAL MATHEMATICS LEVEL



Correlations were computed between reading and mathematics initial scores and between reading and mathematics gains. These figures show a high and significant correlation between initial reading and initial mathematics scores (0.73). There is a much smaller correlation (0.19) between gains in reading and gains in mathematics.

## G. ATTENDANCE AND GAINS BETWEEN TESTS

Attendance information was available on a good many of the tested students. The number of class hours attended between tests was estimated for each student from data provided by teachers. The percentages of students attending various numbers of hours between tests were:

| Hours Attended Between Tests | Percent | Cumulative Percent |
|---|---|---|
| 2 - 19 | 5.3 | 5.3 |
| 20 - 39 | 14.2 | 19.5 |
| 40 - 59 | 17.8 | 37.3 |
| 60 - 79 | 28.8 | 66.1 |
| 80 - 99 | 13.9 | 80.0 |
| 100 - 199 | 9.2 | 89.2 |
| 200 - 1158 | 10.8 | 100.0 |

Generally, the interval between tests was four months. Mean and median attendance was associated with mean and median gains as follows:

| | Hours Attended Between Tests | Reading Gain | Mathematics Gain |
|---|---|---|---|
| Mean | 97.9 hours | 0.5 grades | 0.3 grades |
| Median | 66.0 hours | 0.4 grades | 0.3 grades |

The average gains for various attendance periods were as follows:

| Class Hours Attended Between Tests | Average Grade Level Gain | |
|---|---|---|
| | Reading | Mathematics |
| Less than 46 hours | 0.4 | 0.5 |
| 46-60 hours | 0.2 | 0.4 |
| 61-88 hours | 0.8 | 0.4 |
| 89 or more hours | 0.4 | 0.3 |

The foregoing figures show that reading gains are irregularly greater after a larger number of hours of instruction. Paradoxically, mathematics gains decline slightly with additional hours of instruction. Crosstabulations shed little light on this matter. A tabulation of mathematics gains by hours between tests reveals no significant pattern. Tabulation of reading gains by hours between tests does show a degree of relationship between the highest gains (those of a full grade or more) and a greater number of hours of instruction, as follows:

| Class Hours Attended Between Tests | Percent of Students with this Attendance Gaining a Full Grade or More (Reading) |
|---|---|
| Less than 45 hours | 16% |
| 46-60 hours | 16% |
| 61-88 hours | 38% |
| 89 or more hours | 30% |

H. RELATIONSHIPS BETWEEN TEST GAINS AND OTHER DATA

Test Gains and Demographic Characteristics. Females tended to gain more than males, even though females initially scored higher. No clear-cut relationships between race or age and test gains are evident. Whites gained less than blacks or others in reading, but more in mathematics. The middle age group studied (25-34) gained slightly less than either the younger group or the older group.

| Race | Average Grade Level Gain | |
|---|---|---|
| | Reading | Mathematics |
| White | 0.4 | 0.4 |
| Black | 0.5 | 0.3 |
| Other | 1.1 | 0.2 |

| Sex | Average Grade Level Gain | |
|---|---|---|
| | Reading | Mathematics |
| Male | 0.4 | 0.3 |
| Female | 0.6 | 0.4 |

| Age | Average Grade Level Gain | |
|---|---|---|
| | Reading | Mathematics |
| Under 25 | 0.5 | 0.4 |
| 25-34 | 0.4 | 0.3 |
| 35-44 | 0.5 | 0.4 |

Test Gains and Previous Schooling. Relationships between test gains and previous school experience show no consistent pattern. Average grade level gains, by last grade of school completed and by previous attitude toward school, are as follows:

| Last Grade of School Completed | Average Grade Level Gain | |
|---|---|---|
| | Reading | Mathematics |
| 0-6 | 0.7 | 0.3 |
| 7-8 | 0.3 | 0.3 |
| 9-10 | 0.4 | 0.4 |
| 11 and over | 0.6 | 0.4 |

| Previous Attitude toward School | Average Grade Level Gain | |
|---|---|---|
| | Reading | Mathematics |
| Obtained High School Credential | 0.5 | 0.4 |
| Left School but Wanted to Continue | 0.5 | 0.3 |
| Left School and Did Not Want to Continue | 0.4 | 0.4 |

Test Gains and Employment and Welfare Status. Test gains did not consistently vary according to employment or welfare status. Differences in gains between workers and non-workers were not statistically significant. Similarly, there were no significant differences in gains evident between those receiving welfare or public assistance and those not receiving welfare or public assistance.

## I. COMPARISONS WITH SELECTED MDTA BASIC EDUCATION ENROLLEES

During the same school year (1971-72) in which the above tests were given, approximately the same tests were given to students enrolled in a different group of basic education classes: those conducted by the Manpower Development and Training Act (MDTA) Institutional Training Program. The MDTA Basic Education enrollees were tested as a part of a study conducted by North American Rockwell Information Systems Company for the U. S. Office of Education (contract OEC-0-71-4715).

In comparing results from the present study with results from this study of MDTA enrollees, several differences in methodology should be noted, since they have considerable bearing on interpretations to be given to the data. One important difference is that the present longitudinal study of the ABE program (referred to in the following paragraphs as "the ABE study") is based on a national sample of students, selected according to a design aimed at reaching estimates applicable to the entire program. By contrast, the study of Basic Education trainees in the MDTA program (referred to as "the MDTA study") was purposely not based on a national sample. Instead it took a case study approach in which sites and students were picked for a variety of reasons including geographic distribution, interest, and scheduling considerations.

Another important difference between the two studies relates to the basic skills tests used. Although both studies used the Tests of Adult Basic Education (TABE) published by CTB/McGraw Hill, the ABE study used only one level of the test (Medium). The MDTA study, on the other hand, used all three levels (Easy, Medium, and Difficult). However, there is some evidence

presented in the MDTA study that the Medium and Difficult tests are not well matched to each other in grade equivalency. MDTA students who took pretests at the Medium level and posttests at the Difficult level appeared to achieve artificially inflated gains.

In addition to differences in methodology, the two studies of course were concerned with programs having different orientations and purposes. The MDTA basic education work is carried out as a part of a job training program; ABE, as such, is usually not directly related to job training.

Recognizing therefore the lack of strict comparability between data from the two studies, a review of findings is still of interest. The tabulations below present basic statistics on student characteristics, along with average test scores. MDTA gains are tabulated only for the students who took the Medium level test both "before" and "after," since only these students took tests at the same level as the students in the ABE study.

| | ABE | MDTA |
|---|---|---|
| **Student Characteristics** | | |
| Sex | | |
| Female | 62% | 45% |
| Male | 38% | 55% |
| Race | | |
| White | 48% | 37% |
| Black | 44% | 47% |
| Other | 8% | 16% |
| Age | | |
| Under 23 | 28% | 39% |
| 23 - 30 | 30% | 33% |
| 31 - 44 | 42% | 20% |
| Over 44 | Not included | 7% |
| Last grade of school completed | 10.2 | 10.8 |
| **Average Grade Levels on Initial Tests** | | |
| Reading | 5.4 | 7.4 |
| Mathematics | 6.4 | 7.7 |
| **Average Gains and Attendance Between Tests** | | |
| Reading Gain | 0.5 grades | 0.4 grades |
| Attendance | 98 hours | 54 hours |

As indicated in the above tabulation, the MDTA population contained a larger proportion of males and of younger students than the ABE population. The MDTA students had completed about half a grade more of schooling, on the whole, than the ABE students. In addition, the MDTA students scored 1.3 to 2.0 grade levels higher on initial tests than the ABE students. However, average gains and hours of instruction between tests were not very different for the ABE and MDTA students who took the same tests.

Reading gains for the students who took the same tests showed the following breakdowns for the two studies:

| | | Average Grade Level Gain | |
|---|---|---|---|
| | | ABE | MDTA |
| Race | | | |
| | White | 0.4 | 0.5 |
| | Black | 0.5 | 0.4 |
| Sex | | | |
| | Male | 0.4 | 0.3 |
| | Female | 0.6 | 0.5 |
| Age* | | | |
| | Younger | 0.5 | 0.4 |
| | Middle | 0.4 | 0.3 |
| | Older | 0.5 | 0.6 |
| Number of Hours of Instruction Between Tests** | | | |
| | Least | 0.4 | 0.3 |
| | Low Middle | 0.2 | 0.4 |
| | High Middle | 0.8 | 0.3 |
| | Most | 0.4 | 0.6 |

Because of the differences in method noted above, these comparisons between figures from the two studies should be considered as suggestive rather than definitive. Similarities in pattern do occur for sex (females gain slightly more than males) and for age (younger and older groups gain slightly more than the middle group). Both studies also show a noticeable but unsteady relationship between reading gains and hours of instruction.

---

* Different intervals for age were used in the two studies, as follows: ABE -- under 25, 25-34, and 35-44; MDTA -- under 23, 23-30, and 31-44.

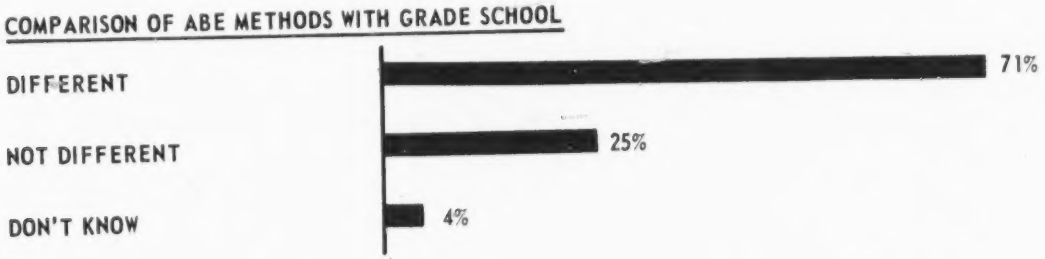
** The different intervals for hours of instruction used for the two studies were: ABE -- under 46, 46-60, 61-88, 89 or more; MDTA -- under 51, 51-75, 76-99, 100 or more.

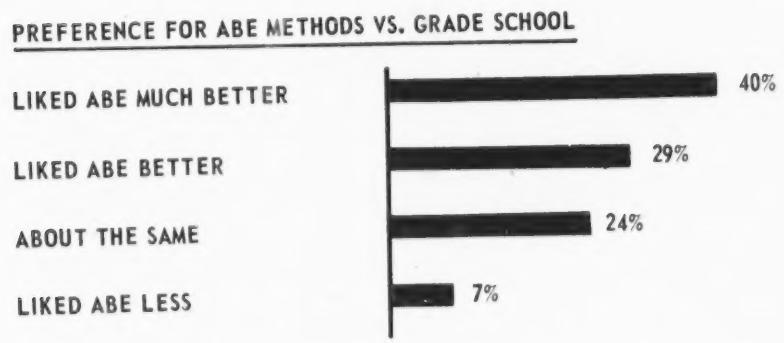
## VI. STUDENT OPINIONS

In follow-up interviews, students were asked for their opinions of various aspects of the basic education program they had attended. They were also asked how much they believed their abilities to read, write, and work with numbers had increased during the past year.

### A. STUDENT EVALUATIONS OF ABE

The great majority of students thought that the basic education program's methods of teaching were both different from and better than those used in the grade schools they had attended.




The teaching materials (books, tapes, etc.) used in ABE were found interesting by all but a few students:

| Interest of Teaching Materials | Percent |
|---|---|
| Very Interesting | 57% |
| Interesting | 39% |
| Not Interesting | 4% |

As reported by students, the instructional staff of 68% of all classes consisted of a teacher only, without an aide, helper, or assistant. In the remaining classes at least one other person assisted the teacher. (From information provided by teachers, the assistant would be either a second teacher, a paid paraprofessional, or an unpaid volunteer.) Student opinions on their interactions with teachers and assistants were as follows:

| Amount of Time Spent with the Student | By the Teacher, Working with the Student Individually | By the Teacher or Assistant Working with the Student as Part of a Class or Group | By the Assistant (if any), Working with the Student Individually |
|---|---|---|---|
| A lot of time | 26% | 51% | 23% |
| Some time | 42% | 32% | 39% |
| A little time | 26% | 12% | 27% |
| No time | 6% | 5% | 11% |

| Degree of Help In Learning | Provided by the | |
|---|---|---|
| | Teacher | Assistant (if any) |
| Excellent | 51% | 36% |
| Good | 39% | 49% |
| Fair | 8% | 12% |
| Poor | 2% | 3% |

Students were also asked how much time they spent in the program learning by themselves using books or instructional materials such as worksheets or machines.

| Amount of Time Spent Learning Alone | Percent |
|---|---|
| A lot of time | 40% |
| Some time | 42% |
| A little time | 15% |
| No time | 3% |

In comparing three methods of learning -- learning alone, learning with a teacher individually, and learning with a teacher as a part of a group or class -- most students found the least useful method to be learning alone with books or materials.

| Method | Percent Finding This Method | | |
|---|---|---|---|
| | Most Useful | In Between | Least Useful |
| Learning by oneself with books or instructional materials | 16% | 22% | 62% |
| Working alone with a teacher or a teacher's aide | 40% | 40% | 20% |
| Working with a teacher as a part of a group or class | 45% | 38% | 17% |

As a sidelight on the relationship of ABE to health information and services, students were asked these two questions in the first follow-up interview:

> "Did the basic education program give you any health information or teach you anything about health?"
>
> Yes - 38%
> No - 62%

> "Did the basic education program help you receive health services from any source?"
>
> Yes - 13%
> No - 87%

B. EVALUATIONS OF SELF-IMPROVEMENT

In both follow-up interviews (February-March, 1973 and July-August, 1973) students were asked how much they believed their abilities to read, write, and work with numbers had improved during the past year. Answers generally indicated either some or very much improvement. The least improvement was noted in writing ability. Responses to the second follow-up interviews were almost the same as those to the first. Since differences were insignificant, the tabulation below gives the means of the two interviews.

| Amount of Increase During the Past Year | In Reading Ability | In Writing Ability | In Ability to Work With Numbers | In Reading of Newspapers, Magazines, and Books |
|---|---|---|---|---|
| Very Much | 49% | 33% | 46% | 36% |
| Some | 32% | 32% | 28% | 33% |
| A little | 14% | 20% | 16% | 16% |
| Not at all | 5% | 15% | 10% | 15% |

## VII. LOCAL PROGRAM AND CLASS CHARACTERISTICS

Information was collected from the approximately 90 administrators of local ABE programs and the approximately 200 classroom teachers who were in charge of the ABE activities in which the students in this study's sample were involved. Data were collected for the most part in March, 1972, and cover the 1971-72 school year. Cost data, which were collected both for 1970-71 and 1971-72, are presented in a later subsection.

### A. PROGRAM CHARACTERISTICS

The "average" program in the sample of 92 from which data were collected was operated by a school district, conducted 43 ABE classes during the year, had been in existence for 6 years, and was confident of continuing in existence for at least the next two years. Detailed questions and percentages of answers are as follows:

| Administrative Entity Operating the Program | Percent of Programs |
|---|---|
| School District | 75% |
| Post-Secondary Institution | 21% |
| Area Vocational-Technical School | 2% |
| Board of Cooperative Services | 2% |

| Number of ABE Classes in the Program | Percent of Programs | Cumulative Percent |
|---|---|---|
| 1 - 4 | 15.7% | 15.7% |
| 5 - 9 | 27.0% | 42.7% |
| 10 - 14 | 7.9% | 50.6% |
| 15 - 19 | 6.7% | 57.3% |
| 20 - 29 | 7.9% | 65.2% |
| 30 - 39 | 12.3% | 77.5% |
| 40 - 99 | 6.8% | 84.3% |
| 100 - 325 | 15.7% | 100.0% |

Mean Number of Classes: 43

Median Number of Classes: 14

Range: 1 to 325

| Number of Years the Program Has Been in Existence | Percent of Programs |
|---|---|
| 1-3 years | 12.1% |
| 4-5 years | 14.3% |
| 6 years | 29.6% |
| 7 years | 27.5% |
| 8 or more years | 16.5% |

Mean Number of Years: 6.1

Median Number of Years: 6.3

To the question, "Is continuance of this ABE program for the next two years reasonably certain?" the answers were:

Yes - 97%

No - 3%

Reasons given by the 3% who were uncertain of continuing included that "attendance has been low," "the program may not be backed by the new superintendent," and "Federal funds may not be available."

Information was requested from program administrators on whether ABE programs had "special relationships to any particular manpower program, community agency, or employer." Respondents appeared to vary considerably in their interpretation of "special relationship," since some administrators confined themselves to much more important relationships than did others. Only 42% of programs were stated to have such special relationships. The most frequently mentioned relationships were with:

| | Percent |
|---|---|
| Manpower Development and Training Activities | 17% |
| Neighborhood Youth Corps | 12% |
| Work Incentive (WIN) | 12% |
| Welfare Departments | 11% |
| State Employment Service | 10% |
| Community Action Program | 8% |
| Concentrated Employment Program (CEP) | 7% |
| Hospitals | 5% |
| Vocational Rehabilitation | 5% |
| Employers | 3% |
| Model Cities | 3% |
| Parochial Schools | 3% |
| Churches | 3% |
| Operation Mainstream | 3% |
| Colleges | 2% |
| Jail and Probation | 2% |
| Urban League | 2% |
| Opportunities Industrialization Center | 2% |

The same question, on special relationships, was also asked of classroom teachers. Only 27% of teachers responded affirmatively. Most frequently mentioned were WIN (4%), CEP (2%), and hospitals (2%). Other answers were very scattered.

B. CLASS SCHEDULE AND ENROLLMENT

The "average" or "typical" class in the sample of 20 from which data were collected met in a school building two evenings a week for 3 hours an evening from September through May or June, had an enrollment of 16 students, and offered instruction from grade 1 up through grade 8. Details are tabulated below.

Ninety-four percent of all classes had a regular schedule of meetings; the remaining six percent involved a Learning Center or similar activity where students attended whenever they could.

Types of meeting place were:

| | Percent |
|---|---|
| Secondary School | 29% |
| Primary School | 20% |
| Adult Education Center | 15% |
| Church | 7% |
| Post-Secondary School | 6% |
| Community Center | 5% |
| Vocational or Technical School | 4% |
| Business Office | 3% |
| Hospital | 2% |
| Miscellaneous | 9% |

"Miscellaneous" meeting places included library, day care or Head Start center, YMCA, lodge, private home, etc.

Classes began and ended in most months of the year; 23% of all classes were continuous, with no month scheduled for beginning or ending. The most frequent months for beginning were September (53%) and October (18%); for ending, May (39%) and June (24%).

Almost all (94%) of the classes had open enrollment, in the sense that students were admitted at any time of the year, regardless of the beginning of the class.

Classes met from one to five days a week, the great majority (73%) two days a week. The mean number of days per week was 2.5; the median, 2.1.

| Days Per Week | Percent of Classes |
|---|---|
| 1 | 6% |
| 2 | 73% |
| 3 | 6% |
| 4 | 1% |
| 5 | 14% |

Only one percent of classes met on any weekend day (Saturday or Sunday).

The mean number of hours per class meeting was 2.9; the median was 2.8 hours. Details are:

| Hours Per Class Meeting | Percent of Classes | Cumulative Percent |
|---|---|---|
| 1.0 | 2.9 | 2.9 |
| 1.5 | 1.0 | 3.9 |
| 2.0 | 20.4 | 24.3 |
| 2.5 | 16.5 | 40.8 |
| 3.0 | 49.0 | 89.8 |
| 3.5 | 1.0 | 90.8 |
| 4.0 | 2.9 | 93.7 |
| 4.8 | 0.5 | 94.2 |
| 5.0 | 2.4 | 96.6 |
| 6.0 | 1.9 | 98.5 |
| 8.0 | 1.5 | 100.0 |

Class meeting times were:

| Time | Percent |
|---|---|
| Morning | 12.1% |
| Afternoon | 5.8% |
| Evening | 75.3% |
| All day | 6.8% |

Mean class hours per week, as calculated from mean days per week times mean hours per day, were 7.0 hours per week. Median hours, calculated similarly, were 6.0 hours per week.

Enrollment in classes, as of November 15, 1971, ranged from 3 to 81, with a mean of 16.1 and a median of 14.7. Percentages of classes with various enrollments were:

| November 15, 1971 Enrollment | Percent of Classes |
|---|---|
| 3 - 9 | 14.6% |
| 10 - 14 | 34.4% |
| 15 - 19 | 27.2% |
| 20 - 29 | 19.4% |
| 30 - 81 | 4.4% |

The above enrollments are based on complete rosters provided by teachers; they do not exclude two types of students (over 44 and migrants) on which no other data were collected during this study.

ABE classes were stated by teachers to offer instruction all the way from pre-elementary to post-secondary. The approximate lowest and highest grade levels in classes were:

| Lowest Grade | Percent of Classes | Cumulative Percent |
|---|---|---|
| 0 | 7.7 | 7.7 |
| 1 | 40.8 | 48.5 |
| 2 | 5.1 | 53.6 |
| 3 | 9.2 | 62.8 |
| 4 | 12.2 | 75.0 |
| 5 | 8.2 | 83.2 |
| 6 | 11.2 | 94.4 |
| 7 | 2.6 | 97.0 |
| 8 | 1.5 | 98.5 |
| 9 | 1.5 | 100.0 |

| Highest Grade | Percent of Classes | Cumulative Percent |
|---|---|---|
| 2 | 0.5 | 0.5 |
| 3 | 5.1 | 5.6 |
| 4 | 6.1 | 11.7 |
| 5 | 3.1 | 14.8 |
| 6 | 14.3 | 29.1 |
| 7 | 6.1 | 35.2 |
| 8 | 27.6 | 62.8 |
| 9 | 9.7 | 72.5 |
| 10 | 5.6 | 78.1 |
| 11 | 5.1 | 83.2 |
| 12 | 16.3 | 99.5 |
| 13 | 0.5 | 100.0 |

The mean lowest grade was 2.8; the mean highest grade, 8.1.

C. INSTRUCTIONAL STAFF

The instructional staff of a typical ABE class tends to consist of one teacher, holding a teaching certificate, with more than two years ABE experience. The teacher has probably received special training in ABE and is of the same race and ethnic group as the majority of students; however, the teacher's ABE duties are generally part-time (less than 20 hours per week). Detailed figures follow:

Almost all ABE classes (89%) have only one teacher; 10% have two teachers; 1% have three teachers.

Only 17% of classes have paraprofessional aides; only 7% have assistance from unpaid volunteers; a sprinkling (3%) have from 2 to 4 aides or volunteers.

Only 4% of teachers do not have teaching certificates; a few (about 8%) of the aides and volunteers have certificates.

Seventy-one percent of teachers have more than two years ABE experience; about one-quarter of the aides and volunteers have more than two years ABE experience.

Teachers were asked if they had attended short or long ABE workshops or courses or inservice training sessions. A short session was defined as 12 hours or less; a long session was defined as 13 hours or more. Almost all classes had at least one teacher who had attended either a short or a long session or both.

| | Percent of Classes |
|---|---|
| One or more teachers had attended both a short and a long ABE training session | 43% |
| One or more teachers had attended an ABE training session, but a short one only | 31% |
| One or more teachers had attended a long ABE training session only | 14% |
| No teacher had attended any ABE training session | 12% |

Nearly one-third of the aides and volunteers had attended some type of ABE training session.

Seventy-eight percent of teachers are of the same race and ethnicity as the majority of their students. Fifty-four percent of aides and 41% of volunteers are of the same race and ethnicity as students in their classes.

Only 21% of ABE teachers are assigned to ABE at least 20 hours per week. Twenty-five percent of the aides and none of the volunteers are assigned to ABE at least 20 hours per week.

D. INSTRUCTIONAL GOALS

Teachers were asked about the emphasis or priority placed on various instructional goals in their classes. Of the nine goals specified in the interview, the most emphasized were reading, computation, and spelling. However, all nine goals were given at least some emphasis in at least half of the classes. A complete tabulation of specified goals follows, in descending order of percent of classes giving great emphasis to each goal:

| | | Percent of Classes With Various Emphases | | | |
|---|---|---|---|---|---|
| | Goal | Great Emphasis | Some Emphasis | Present But Not Emphasized | Not Present |
| 1. | Reading | 85% | 11% | 3% | 1% |
| 2. | Computation | 69% | 20% | 5% | 6% |
| 3. | Spelling | 50% | 43% | 4% | 3% |
| 4. | Preparation for Job Improvement | 36% | 40% | 20% | 4% |
| 5. | Writing | 33% | 45% | 18% | 4% |
| 6. | Preparation for GED Studies | 33% | 32% | 14% | 21% |
| 7. | Grade-Level Advancement | 33% | 37% | 22% | 8% |
| 8. | "Life Skills" -- e.g. voting, money management | 29% | 52% | 12% | 7% |
| 9. | Teaching Parents to Assist Their Children in School | 20% | 32% | 26% | 22% |

Class emphasis on instructional goals is primarily educational rather than job-related, just as student motivation is. See Section 2.III.E above.

E. INSTRUCTIONAL METHODS AND MATERIALS

Teachers were asked to state the extent to which 13 specified possible classroom features were present. Adult-oriented instructional materials were present in almost all classes; job-oriented instructional materials were present in very few. Individualized instruction was a stated feature of most classes; programmed instruction was much less frequently present. Counseling services were often present, but post-program placement services were rarely available. A complete tabulation of specified features follows, in descending order of percent of classes stated to have the feature always present:

| | Feature | Degree to Which Present | | | |
|---|---|---|---|---|---|
| | | Always | Usually | Sometimes | Rarely or Never |
| 1. | Adult-oriented instructional materials | 68% | 21% | 6% | 5% |
| 2. | Adult furniture, setting, procedures, etc. | 68% | 17% | 6% | 9% |
| 3. | Individualized instruction | 57% | 27% | 11% | 5% |
| 4. | Student-determined rates of progress | 51% | 27% | 16% | 6% |
| 5. | Counseling services available | 43% | 13% | 15% | 29% |
| 6. | Commercially prepared tests to measure improvement | 40% | 24% | 19% | 17% |
| 7. | Commercially prepared tests to determine placement in class | 39% | 20% | 15% | 26% |
| 8. | Student-selected goals, methods, and materials | 26% | 31% | 30% | 13% |
| 9. | Student participation in evaluation and improvement of materials and methods | 24% | 27% | 31% | 18% |
| 10. | Programmed instruction | 21% | 19% | 32% | 28% |
| 11. | Students help instruct each other | 19% | 30% | 41% | 10% |
| 12. | Post-program placement services available | 18% | 9% | 25% | 48% |
| 13. | Job-related instructional materials | 11% | 18% | 41% | 30% |

Teachers were also asked to state whether any of the above features were present to a different extent for language instruction, as opposed to instruction in computation. In almost all cases, the features were very nearly equally present for both types of instruction. The only feature where there were any separate responses for language and computation which differed more than two percentage points from those tabulated above was programmed instruction. In this case programmed instruction was used a bit less often for computation than for language. The exact figures are:

| | Always | Usually | Sometimes | Rarely or Never |
|---|---|---|---|---|
| Programmed instruction-language | 22.2% | 20.1% | 34.5% | 23.2% |
| Programmed instruction-computation | 19.3% | 18.2% | 30.2% | 32.3% |

Data were collected on the presence and use of mechanical equipment for instruction. Although three-quarters of the ABE classes had such equipment available, it appears that only about one-fifth used it with any degree of regularity. Mechanical equipment mentioned as present, in order of frequency, included:

| Type of Equipment Present | Percent of Classes |
|---|---|
| Tape recorder | 28% |
| Filmstrip projector | 26% |
| Overhead projector | 14% |
| "Audio-visual," unspecified | 14% |
| Language Master | 14% |
| Controlled reader | 12% |
| Record player | 9% |
| Movie projector | 8% |
| Tach X | 6% |
| EDL equipment | 5% |
| Miscellaneous other | 15% |

On the average, classes with equipment had two of the above types present.

As to equipment use, few classes claimed to use any type of equipment even as often as once a month. Responses were:

| Frequency of Use of Instructional Equipment | Percent of Classes |
|---|---|
| Daily | 3% |
| Regularly | 12% |
| Once a week | 3% |
| Once a month | 2% |
| Seldom | 11% |
| Never | 3% |
| No statement made on use | 41% |
| No equipment present | 25% |

In addition to mechanical equipment and the 13 specified features tabulated above, teachers were asked about any other special features of their classes which they considered important. About half (54%) mentioned a great variety of features. Very few were mentioned by more than 1% of respondents. Most frequently mentioned were:

| Special Feature | Percent of Classes |
|---|---|
| Field trips | 3% |
| Discuss newspapers, TV, and radio programs | 2% |
| Guest speakers | 2% |
| Social hours | 2% |
| Team teaching | 2% |

## VIII. PROGRAM AND CLASS COST DATA

The figures presented in this section are based on data collected from local program directors and classroom teachers. Figures for 1970-71 are actual costs; for 1971-72, they are estimated costs. It should be kept in mind that various source and expenditure categories were not defined in the same way by all respondents. For example, not all program directors were aware of the percentage of their budgets which came from State as opposed to Federal sources, since money from both sources was combined before being

released to local agencies. Also, local funds were sometimes in cash and sometimes in facilities or services; when not in cash, they might or might not be included among the budget items reported. Legislation requires that at least 10% of ABE funds expended be non-Federal. No attempt was made in this study to acquire definitive, uniform, accounting data.

## A. SOURCES OF LOCAL ABE PROGRAM FUNDS

As shown in Table 2-3, the average ABE program sampled had total funds of about $161,000 available in 1970-71 and $173,000 in 1971-72. Nearly 80% of the funds were from Federal sources; State and local contributions made up the bulk of the remainder (12% State, 7% local). About 2% of funds came from non-governmental sources. Non-governmental sources specified were:

- Sponsoring college
- WIN
- Grants from business or foundation
- Labor department
- Student contributions allowed after other money runs out
- Title III

All programs had funds from Federal sources. None had funds listed from student fees, although one program allowed student contributions after other funds had been exhausted. Forty-eight percent had some funds from State sources, 59% had some local funds, and 11% had "other" funds.

For 1971-72, mean program funds by source may be allocated to classes and students by considering that the mean number of classes reported per program was 42.9 and the mean number of students enrolled per class was 16.1. This works out to means of $4037 per class and $250 per student, for the year. However, it should be noted that the number of students per class used in this computation (16.1) is based on class enrollment figures as of a single date (November 15, 1971) rather than for an entire year. If 16.1 is thought of as an average number of "slots" per class, and if it is considered that a number of individuals may pass through each slot as students enter and depart during the year, it is evident that an average of less than $250 is spent on each individual student. However, $250 per year is the average cost of maintaining a slot. With this understanding, the allocation of dollars per student (or per slot) proportional to reported fund source is:

Table 2-3. Local ABE Program Fund Sources
(Means, Based on Data from 92 Programs)

| FUND SOURCE | MEAN, 1970 - 71 | PERCENT OF TOTAL | MEAN, 1971 - 72 | PERCENT OF TOTAL | 1971 - 72 AS PERCENT OF 1970 - 71 |
|---|---|---|---|---|---|
| Federal | $127,965 | 79.5% | $136,079 | 78.5% | 106.3% |
| State | 17,319 | 10.8% | 21,099 | 12.2% | 121.8% |
| Local | 11,864 | 7.4% | 12,649 | 7.3% | 106.6% |
| Student Fees | 0 | 0.0% | 0 | 0.0% | -- |
| Other | 3,673 | 2.3% | 3,498 | 2.0% | 95.2% |
| Total | $160,821 | 100.0% | $173,325 | 100.0% | 107.8% |

| Source | Dollars Per Student, 1971-72 |
|---|---|
| Federal | $196 |
| State | $ 31 |
| Local | $ 18 |
| Other | $ 5 |
| Total | $250 |

As a sidelight, it was reported that at least some students in about one-quarter of all classes received pay or financial assistance for attending class. No exact figures were collected either on numbers of students or on amount of financial support. The types of assistance, by percent of classes in which they were present, were:

| Type of Assistance | Percent of Classes In Which Present |
|---|---|
| None | 74.2 |
| Work Incentive (WIN) | 4.4 |
| G. I. Bill | 3.9 |
| CEP Stipends | 2.4 |
| Neighborhood Youth Corps | 2.4 |
| On Welfare | 2.4 |
| Other @ less than 2.0% (MDTA, AFDC, Vocational Rehabilitation, Janitorial Pay, Employer Pays, etc.) | 10.3 |

## B. PROGRAM EXPENDITURE CATEGORIES

Table 2.4 shows that around 60% of local program expenditures are for instructional purposes, 14% for administration, 7% for clerical support, 5% for guidance and counseling, and 5% for books, supplies, and equipment. Means are based on reported figures which generally include benefits along with salaries in the appropriate category (e.g., fringe benefits, if any, for teachers and aides are included with salaries in the instructional category).

Table 2-4. Local ABE Program Expenditures (Means, Based on Data from 92 Programs)

| EXPENDITURE CATEGORY | MEAN, 1970 - 71 | PERCENT OF TOTAL | MEAN, 1971 - 72 | PERCENT OF TOTAL |
|---|---|---|---|---|
| Administrative | $ 21,030 | 14.0% | $ 20,929 | 13.0% |
| Instructional | 90,607 | 60.4% | 99,979 | 62.0% |
| Guidance and Counseling | 7,301 | 4.9% | 8,755 | 5.4% |
| Clerical | 9,675 | 6.5% | 11,620 | 7.2% |
| Books, Supplies, Equipment | 9,761 | 6.5% | 7,626 | 4.7% |
| All Other | 11,531 | 7.7% | 12,353 | 7.7% |
| Total | $149,905 | 100.0% | $161,262 | 100.0% |

It will be noted that total expenditures (Table 2-4) are about 7% less than total budgets (Table 2-3). This discrepancy may be accounted for partly by expenditures smaller than planned and partly by deleting "in-kind" (non-cash) facilities and services from expenditure reports.

As a measure of the importance attached to various non-instructional functions, program directors were asked to report funds and personnel specifically assigned to six types of activities. The best-supported by these activities was counseling and advisement, to which about 40% of programs devoted specific funds and personnel. The least supported activity was post-program placement. Figures for all six activities are:

| Non-Instructional Function | Percent of Programs with Specific Funds for this Function | Mean Dollars, if Funded | Percent of Programs with Specific Personnel for this Function | Mean Hours Per Week, if Staffed |
|---|---|---|---|---|
| Counseling and Advisement | 40% | $15,034 | 39% | 31.5 |
| Recruitment and Outreach | 19% | $ 3,521 | 16% | 34.3 |
| Inservice Training | 15% | $ 7,990 | 13% | 52.2 |
| Evaluation and Improvement | 11% | $ 3,947 | 10% | 53.1 |
| Community Relations | 4% | $ 7,075 | 4% | 24.5 |
| Post-Program Placement | 1% | $11,000 | 2% | 57.5 |

C. INSTRUCTIONAL PAY RATES AND CLASS COSTS

As reported by local program directors, pay to ABE teachers ranged from $3.50 to $11.68 per hour. The most frequently mentioned pay rate was $5.00 per hour.

| Minimum Hourly Pay to Teachers | Percent of Programs | Cumulative Percent |
|---|---|---|
| $3.50 - $4.50 | 12.0 | 12.0 |
| $5.00 | 39.1 | 51.1 |
| $5.50 - $6.00 | 14.1 | 65.2 |
| $6.25 - $6.83 | 10.9 | 76.1 |
| $7.00 - $7.80 | 13.0 | 89.1 |
| $8.00 - $11.41 | 10.9 | 100.0 |

Mean $5.97 Mode $5.00 (39.1% of cases) Median $5.24

| Maximum Hourly Pay to Teachers | Percent of Programs | Cumulative Percent |
|---|---|---|
| $5.00 | 30.8 | 30.8 |
| $5.40 - $5.50 | 13.2 | 44.0 |
| $6.00 | 16.4 | 60.4 |
| $6.25 - $6.85 | 8.8 | 69.2 |
| $7.00 - $7.45 | 11.0 | 80.2 |
| $7.50 - $8.00 | 8.8 | 89.0 |
| $8.40 - $11.68 | 11.0 | 100.0 |

Mean $6.43 Mode $5.00 (30.8% of cases) Median $5.89

Comparable data for paraprofessional aides in ABE programs show a range from 50 cents to $5.62 an hour. Details on minimum and maximum hourly rates for aides are:

| Minimum Hourly Pay to Aides | Percent of Programs | Cumulative Percent |
|---|---|---|
| $0.50 - $1.65 | 9.0 | 9.0 |
| $1.70 - $1.90 | 13.4 | 22.4 |
| $2.00 | 22.4 | 44.8 |
| $2.01 - $2.25 | 11.9 | 56.7 |
| $2.50 | 16.4 | 73.1 |
| $2.58 - $2.89 | 12.0 | 85.1 |
| $3.00 - $4.20 | 14.9 | 100.0 |

Mean $2.29 Mode $2.00 (22.4% of cases) Median $2.05

| Maximum Hourly Pay to Aides | Percent of Programs | Cumulative Percent |
|---|---|---|
| $1.65 - $1.90 | 10.4 | 10.4 |
| $2.00 | 12.0 | 22.4 |
| $2.10 - $2.48 | 10.4 | 32.8 |
| $2.50 | 17.9 | 50.7 |
| $2.67 - $3.00 | 18.0 | 68.7 |
| $3.06 - $3.28 | 14.9 | 83.6 |
| $3.50 - $5.62 | 16.4 | 100.0 |

Mean $2.72 Mode $2.50 (17.9% of all cases) Median $2.58

Averaging the mean minimums and the mean maximums, the average hourly pay to teachers was $6.20 and the average for aides was $2.50.

School districts on the whole paid ABE teachers at somewhat higher rates than did post-secondary institutions sponsoring ABE programs in the sample. Although both school districts and post-secondary institutions paid teachers at a very wide range of hourly rates, the means show a noticeable difference, as follows:

| Institutional Sponsorship | Mean Hourly Pay to Teachers | |
|---|---|---|
| | Minimum | Maximum |
| School Districts | $6.22 | $6.52 |
| Post-Secondary | $5.18 | $6.29 |
| All Institutions | $5.97 | $6.43 |

Classroom teachers provided figures on total instructional costs of their classes, including all salaries paid to teachers (and to aides, when present) for the time of a normal class. The mean instructional cost of a class was $19.27; the median, $16.46. Detailed figures are:

| Total Salaries for One Class Session | Percent Of Classes | Cumulative Percent |
|---|---|---|
| $6.50 - $9.99 | 4.5 | 4.5 |
| $10.00 - $14.99 | 17.8 | 22.3 |
| $15.00 - $19.99 | 42.5 | 64.8 |
| $20.00 - $24.99 | 15.9 | 80.7 |
| $25.00 - $29.99 | 5.9 | 86.6 |
| $30.00 - $34.99 | 5.4 | 92.0 |
| $35.00 - $75.24 | 8.0 | 100.0 |

## IX. METHODS OF MEETING STATE AND LOCAL NEEDS FOR ABE

The primary objective of the present study was to obtain longitudinal information relating to the impact of basic education on enrollees in the program. A subordinate objective was to obtain information on the ways in which States,

working with local ABE administrators, identify and serve those adults who most need ABE. In addition, information was sought on the extent to which States have promoted and local programs have adopted the results and products of various sorts of innovative ABE projects.

Information relating to these topics was obtained from 15 State Directors of ABE, in addition to the local program administrators and classroom teachers represented in the sample.

## A. METHODS OF ESTABLISHING ABE CLASSES

In early 1972, when State and local ABE program directors were interviewed for this study, around three-quarters of the local programs had been in existence for six years or more, and continued existence seemed reasonably certain for almost all of them. Furthermore, with fairly steady budgets at both the State and local levels, comparatively few programs would be expected to be added or dropped from year to year.

With programs showing this degree of stability, it is not surprising that needs for ABE do not seem to be vigorously re-analyzed each year. Both State and local programs do make use of a variety of information sources relevant to determining needs. At the 1972 stage in their development, however, it appears that program and class locations were established each year to a large extent on the basis of continuity from the preceding year.

Information sources used by State and local program directors to assist in determining needs for ABE include the following:

| Information Source | Percent* of Programs Using | |
|---|---|---|
| | State | Local |
| Local surveys | 87% | 28% |
| Census reports | 100% | 25% |
| Social service agencies | -- | 17% |
| Requests from community | -- | 14% |
| Employment data | 47% | 9% |
| State surveys | 33% | -- |

* Adds to over 100%, since multiple responses were sought.

Other information sources mentioned by local program directors included:

| | |
|---|---|
| Recruitment, then plan classes accordingly | 13% |
| Discussions with teachers, State Education Departments, etc. | 13% |
| Churches | 11% |
| Employers | 8% |
| Advisory committees | 7% |
| Public school files to identify dropouts | 5% |
| Miscellaneous other | 8% |

Once information on needs is collected, limited regular use appears to be made of it. Almost all State directors analyze information to show which parts of their States have the greatest numbers of concentrations of adults needing ABE. However, only 20% develop analyses showing discrepancies, locality by locality, between numbers of adults needing ABE and numbers actually enrolled in ABE. Forty percent prepare reports which show future projections of needs for ABE, and 47% prepare reports showing where limited ABE resources can be most effectively applied.

Eighty percent of State directors affirm that State level assistance is given to establishing or enlarging ABE programs in certain localities. However, little mention of State guidance is made by local program administrators. At the local program level, the dominant factor in establishing ABE classes seems to be past or expected enrollment. Local answers to "How do you decide how many ABE classes to have each year?" were:

| | |
|---|---|
| Current enrollment | 30% |
| Budget restrictions | 26% |
| Enrollment previous year | 16% |
| Geographic spread | 6% |
| Survey data | 5% |
| Miscellaneous | 10% |

To the question, "How do you decide where ABE classes should be located?" local directors replied:

| | |
|---|---|
| Wherever students can be gathered | 21% |
| Near to students' residence | 8% |
| Public schools | 7% |
| Adult education centers or Vocational centers | 6% |
| Survey data | 5% |
| Work site | 2% |
| Miscellaneous other | 6% |
| No answer | 45% |

For two-thirds of the States, recruiting of students was not mentioned as being a State level function. However, 73% of the States provide State guidelines on methods of recruiting and retaining special types of ABE students; they also provide rules or procedures for concentrating local ABE efforts on specific target populations. At the local level, on the other hand, few indications were given that there were any priority categories of students that would be most vigorously recruited. Eligibility seemed to be universally determined by standard criteria. Those mentioned by local administrators included:

| | |
|---|---|
| Sixteen years of age or older | 39% |
| Functioning below an 8th grade level | 36% |
| No requirements | 16% |
| Eighteen years of age or older | 16% |
| Not a high school graduate | 9% |
| Not enrolled in a day program | 8% |
| Miscellaneous other | 5% |

Methods by which potential enrollees are identified and recruited by local programs include:

| | |
|---|---|
| Newspapers | 60% |
| Radio | 58% |
| Agencies | 56% |
| Word-of-mouth | 43% |
| Brochures, flyers, etc. | 39% |
| Television | 26% |
| Churches | 20% |
| Forms taken home to parents by children | 18% |
| Employers | 17% |
| Door-to-door | 16% |
| Recruiters | 15% |
| Teachers | 10% |
| Schools | 5% |
| Direct mailing | 5% |
| Miscellaneous other | 8% |

Eighty-seven percent of the States support or organize workshops or other activities to assist in recruiting or training local ABE administrators or teachers.

## B. USE OF RESULTS OF INNOVATIVE PROJECTS

State directors of ABE were asked about State level action taken to promote the use of innovative methods and materials developed by special or demonstration ABE projects. They were also asked to identify the particular projects whose results or products have been used, and the locations where they were used. Finally, they were requested to comment on the degrees of success associated with using these innovations within their States.

From the sample of 15 State responses, it appears that the results and products of many innovative projects are used. All States mentioned at least one project being currently used; one State mentioned five. The average was 2.4. Furthermore,

States specified that project results were being used in from one to "many" locations. Two-thirds of the States said the project results were being used successfully; the remaining one-third of responses included 13% "Maybe," 13% "Too early to tell," and 7% "Not very successful."

In analyzing the specific innovative projects referred to by State directors, it appears that only six were in use in more than one State. They were:

| Project | Percent of States Using Results |
|---|---|
| Home instruction ("Armchair") program as developed in Philadelphia | 20% |
| Teacher awareness in counseling (University of Texas) | 20% |
| Southern Regional Education Board teacher training | 13% |
| Colorado State University Communi-link | 13% |
| Morehead State University reading materials | 13% |
| Southwestern Cooperative Educational Laboratory materials | 13% |

No confirmation of the use of the above six projects was obtained from the sample of local program directors and classroom teachers interviewed. Only 26% of local program directors mentioned using any innovative methods and materials developed by special or demonstration ABE projects. Furthermore, the innovations they mentioned were for the most part either commercially promoted items (like Tach X) or fashionable innovations not developed especially for ABE (like team teaching). The only innovations mentioned by more than one local program director were:

| Innovation | Percent of Programs |
|---|---|
| Learning or reading laboratories | 6% |
| EDL kits | 3% |

At the classroom teacher level, an even smaller percentage (10%) mentioned using specially developed innovative methods or materials. The only ones mentioned more than once were:

| Innovation | Percent of Classes |
|---|---|
| Revolving concept of instruction | 2% |
| SRA materials | 2% |
| EDL materials | 1% |
| Informal reading inventories | 1% |

From the above data, little use of specially developed innovations can be confirmed at the local level.

## X. RELATIONSHIPS BETWEEN PROGRAM CHARACTERISTICS AND EFFECTS ON STUDENTS

As reported above (Section 2.VI), students generally had very positive opinions about their ABE experiences and about their improvement in skills related to the program's academic goals. Most of them also gave ABE credit for job and earnings improvements (Section 2.IV.H).

Many statistical analyses were performed on the data collected by this study in an attempt to determine relationships between various kinds of program characteristics and classroom methods, on the one hand, and effects on students, on the other hand. A brief summary of the results of these special analyses is that nothing clear or convincing could be discovered. Even student attendance had little discernible relationship to improved test scores (Section 2.V.G.). As Section 2.V.H points out, test gains also showed no consistent relationships with race, age, previous schooling, or employment status. Females did tend to make larger test gains than males. Earnings gains for males were higher than for females (Section 2.IV.C). Sex, however, is not a controllable program characteristic.

The statistical methods used in searching for significant relationships between program characteristics and effects on students are described in Section 3. XI. Illustrations of the inconclusive and sometimes contradictory results obtained by following these methods are given in Appendixes E and F, which describe some of the multiple regression and discriminant analyses undertaken. In the multiple regression analyses, attempts were made to relate a great variety of independent variables both to achievement test gains and to earnings gains. The independent variables which were explored included student attitudes and characteristics, classroom characteristics and procedures, attendance, and county environment (from census data). (For a complete list, see Table E-1 in Appendix E.) These explorations suggested as possibilities that emphasis on job improvement and on job-related instructional materials can foster gains in mathematics, and that the presence of mechanical equipment seems related to gains in reading. However, these results were insufficiently clear-cut to form a basis for programmatic recommendations. Attempts to link earnings gains with attendance, with classroom procedures, or with any of the other types of independent variables were even less successful.

This study has shown that students enrolled in ABE liked the methods and materials used and found their teachers helpful. They improved their test scores significantly while they were attending, and their earnings improved substantially. The study was unable to show, however, what approaches to ABE were best for which types of students. There are two possible reasons for this failure to discover relationships. One is that complete data may have been collected on too few individuals to support statistical investigation of the large number of variables considered during the study. Another is that structured questionnaires may inevitably be incapable of getting at the most important aspects of the teaching-learning process.

Although further insight into causal relationships is still desirable, the ABE program studied during this longitudinal evaluation is clearly making a much-needed contribution to the skills and well-being of its students.

## SECTION 3 - METHODOLOGY AND APPLICATION TO OTHER ABE EVALUATIONS

### I. INTRODUCTION

The present section of this report combines an explanation of the methodological procedures used for this study with recommendations for adapting those procedures to State and local evaluations. The discussion explains how this evaluation was carried out, and it points out limitations which should be kept in mind when interpreting the findings presented in Section 2. At the same time, comments are offered on how the methods used can be applied to evaluations of State and local ABE programs.

Methodological topics are taken up approximately in chronological order, beginning with objectives and overall planning, progressing through sampling, instrumentation, and data collection, and ending with analysis and reporting.

### II. OBJECTIVES AND SCOPE

#### A. OBJECTIVES

Four objectives were stated by the U. S. Office of Education for this evaluation. They were:

1. To assess the effectiveness for various target groups of ABE programs funded through the Adult Education Act. Specifically, to collect consistent and comparable data for a representative sample of programs and participants, including
   - pre-testing and post-testing of basic skills.
   - interviews during and after the program on participants' ABE experiences, income, work experience, and appraisal of benefits acquired.
2. To provide, to the extent possible, data comparable with those being collected in other studies of ABE.

3. To provide programmatically useful results on the relationships between post-program performance and the kind of experience that ABE enrollees received (including but not limited to programmed instruction, intensity of instruction, use of teacher aides).

4 To assess the extent to which the States identify and serve adults in geographic areas of greatest need and the extent to which States have incorporated the results and products of innovative projects (both State-funded and those funded through section 309 of the Adult Education Act) into regular ABE classes.

B. SCOPE AND LIMITATIONS

The Office of Education, because of the diversity of program content, geographic location, and background characteristics of participants, as well as necessary budget limitations, placed several constraints on the study. Programs were to be selected from approximately 100 sites in such a way as to insure geographic diversity and national applicability. Restraints on programs and enrollees are listed below.

1. Only ABE programs which had been in operation for at least a year were included.

2. Since at the time the study began the amendments to the Adult Education Act expanding eligibility to adults without a high school diploma had been in effect for only a year and no additional funding had been provided for this expansion, programs under study were restricted to those designed for adults with less than 8 years of schooling.

3. English as a Second Language (ESL) programs were not included. ESL and adult basic education were considered to differ too greatly in purposes, methods, materials, and student bodies to make feasible a uniform study of both ESL and ABE.

4. Programs for migrants, Indians and institutionalized persons were not included because of the unique problems associated with each of these groups. The cost of obtaining adequate follow-up information on the migrant population was considered to be probably prohibitive; the basic education programs for Indians could not be assessed without including BIA programs, a task beyond the financial resources of the study; and institutionalized persons (primarily those in penal institutions) might still be incarcerated at the termination of this study.

5. Enrollees selected for study were limited to those in the age range from 16 to 44 years of age, the priority population group for ABE.

## C. COMMENTS ON APPLICABILITY TO OTHER EVALUATIONS

All evaluations should be based on clearly specified objectives and statements of scope and limitations. The objectives and scope of this study were appropriate to a moderately large-scale national evaluation. The extent to which they are applicable to State and local needs for evaluation is properly a matter for local determination. However, some considerations related to the objectives and scope of the present investigation will be mentioned as worth considering in planning future studies of ABE.

First, it should be recognized that ABE students have many different patterns of attendance. Some attend regularly over a period of several years, others enroll and never attend; most are somewhere in between, but still with no well-defined period for either beginning or ending their voluntary involvement in the program. Therefore any objective depending on obtaining genuine pre-program and post-program data on students will be difficult to achieve.

Second, restricting the scope of a study does not necessarily simplify the work to be done. Focusing on a particular age group or excluding ESL programs, for example, can create a number of technical, administrative, and logistical

problems. Special estimates of group size have to be prepared for sampling purposes, and new data may have to be specially collected for this purpose. Then actual sampling procedures cannot be completely randomized, since exclusions have to be guaranteed. Furthermore, data cannot be collected or used from all students present in classes selected into the sample, thus complicating procedures for testing and interviewing. In general, definitions of groups to be included and excluded are often difficult to establish or to use operationally. The difference between an ESL class and an "ordinary" ABE class varies quite a bit from one situation to another. And although "over 44 years old" is well defined, class records may not include age, so that students may have to be partially interviewed to determine whether or not they should be completely interviewed. Careful consideration should therefore be given to collecting data from a random sample of easily definable units within a universe for which reliable estimates of size already exist.

Finally, many questions about the success of ABE programs can be answered only by studying persons who need ABE but who have never enrolled. The present study excluded such persons, but future studies should consider investigating what types of potential students ABE programs fail to serve, and why.

## III. OVERALL DESIGN AND PLANNING

### A. ALLOWING TIME FOR PLANNING, APPROVALS, AND REVISIONS

In this study, approximately a year of planning and related activities preceded actual field data collection. The U. S. Office of Education spent several months preparing a study design and plan which was issued as a request for competitive proposals in April, 1971. Offerors submitted detailed technical plans and cost estimates in early June. After evaluation of all proposals, the Office of Education awarded a contract to System Development Corporation on June 30. SDC began staff orientation, sample design, test selection, and questionnaire development on July 1.

The original plan was to begin field data collection by testing and interviewing students in October, 1971. As it turned out, three additional months were required for preliminary activities and approvals, so that initial tests and interviews were deferred until January, 1972. Although this delay permitted the development of an improved sampling plan and allowed additional revisions to questionnaires, it had a rather serious effect on the obtainable interval between tests given to students. This interval was shortened from a planned seven or eight months (October-May) to an actual four or five months (January-May).

In retrospect, the three months allowed for sample design, test selection, and questionnaire development could have been adequate only if no difficulties whatsoever had arisen. As it was, unanticipated additional data needed to be collected before the sample could be drawn, disagreements among various project advisors and reviewing authorities needed to be resolved, and replacements for some of the programs selected into the sample had to be determined. In future ABE evaluations, every effort should be made to allow time for unanticipated delays.

## B. CONTROL GROUPS

As originally designed, this study included provisions for collecting information from a quasi-control group, in addition to the sample of ABE students. The quasi-control group would have consisted of persons not enrolled in ABE but known to interviewed students and identified by the students as being similar to themselves in a number of key characteristics. Control group members would then be sought out and interviewed on the same schedule as students.

The purpose of obtaining information on a control group is to be able to estimate which changes observed in students over time are associated with ABE experiences and which changes are independent of ABE. An ideal control group is approximated by random assignment of individuals to treatment (ABE) and control (non-ABE) conditions, so that the influences of variables such as those associated with

motivation to enroll are minimized. The quasi-control group planned for this study was considerably less than ideal, but could have provided comparative information of some interest.

During preliminary field testing of student interview forms, it became apparent that the planned method of identifying control group members, through referrals from students, would not yield adequate numbers for study. Another approach was then considered -- to select control group members from among students entering ABE in 1972 in the same locations as those identified for project participation in 1971. These 1972 students, who would on the whole be similar to 1971 enrollees, would then be interviewed with regard to their experiences and attitudes during the year before they enrolled in ABE -- that is, for the same time period as that covered by interviews with 1971 ABE students.

Finally, however, all plans for a control group were dropped. Among the considerations leading to this decision were the uncertainty of obtaining an adequately matching group, the fact that achievement test data would not be obtained from control group members, and an agreement to convert that part of the contract budget reserved for control group interviews to gathering additional data over a longer period of time from ABE students.

In State and local evaluations, it may well be as difficult to establish any kind of control group as it was during this study. Evaluations on a smaller than national scale, however, may be able to take advantage of local circumstances for identifying adequate numbers of quasi-control group members. Alternatively or additionally, they may be able to use local data sources to obtain background demographic and economic data carefully focused on persons having the same characteristics as the students in their ABE programs.

## IV. SAMPLING

The following discussion of this project's sampling activities is confined to a brief overview. For further details, see Section 3.IX (Data Counts) and Appendix A (Details of the Sampling Plan).

A. ESTIMATE OF THE UNIVERSE TO BE SAMPLED

Before a sample could be selected for this study, it was necessary to obtain as accurate as possible an estimate of the size and characteristics of the universe to be sampled. Characteristics of greatest interest were those central to the study to be undertaken: income, educational achievement, and demographic characteristics. However, as is almost always the case, less information than that desired was actually available about the universe, so that some estimates had to be based on indirect indicators.

Since the study's scope excluded certain categories of students (see Section 3.II), data were needed not for all ABE enrollees, but for all enrollees less those excluded -- enrollees in ESL and GED classes, institutionalized or migrant enrollees, and enrollees over 44 years old.

State data related to most of these categories were available in Adult Basic Education Program Statistics: Student and Staff Data, July 1, 1969-June 30, 1970, prepared by the National Center for Educational Statistics. However, that document enumerated neither migrant students nor students enrolled in ESL programs. Estimates for these numbers were obtained independently, either from Office of Education records or from State Directors of Adult Basic Education. On the basis of these figures, a tabulation was made, by State and Region, of enrollees of interest.

This tabulation showed about 280,000 students meeting the requirements laid down for the study (enrolled in ABE but not in English-as-a-second-language classes, not in institutions, not above 44 years old, non-migrants).

B. SAMPLE DESIGN AND SELECTION

Only rough estimates of within-State distributions were available for students in the universe. For this and other reasons, the State was chosen as a reasonably efficient primary unit for sampling purposes.

To make a sample of around 15 States as effective as possible in representing the entire U. S., a greater degree of stratification control was used than is ordinarily sought. A two-way stratification scheme was adopted, based on grouping States according to geographic region and also according to percentage of black students enrolled in Adult Basic Education classes. Geography and percentage of black students were chosen as stratification criteria in the absence of adequately detailed information on income and educational achievement, which would have been more directly pertinent to the study's objectives.

Stratification proceeded by classifying the 50 States into an 8 x 8 matrix. Geographic area determined allocations along one dimension of the matrix, percent of black students determined allocations on the other dimension; column and row subtotals (numbers of students) were balanced to be as equal as practicable.

This procedure resulted in assigning the 50 States to cells in the matrix. Next, 16 cells were drawn from the total, with each cell's probability of being drawn proportional to the number of students assigned to the cell (and with the constraint that the 16 chosen cells must be distributed in a pattern showing 2 cells in each row and in each column). Finally, one State from each of the selected 16 cells was drawn to enter the sample, the probability of draw again being proportional to number of students.

In order to provide a simple estimate of overall sampling variance, the sample was split into two equivalent parts, each containing a State representing a row and a column. The list below presents the composition of each sample half. Note that since North Carolina appears in both samples, it is treated in the study as two separate States.

Composition of Sample Halves

| Sample A | Sample B |
|---|---|
| Arkansas | Colorado |
| California | Minnesota |
| Georgia | Mississippi |
| Kansas | New York |
| Massachusetts | North Carolina |
| Michigan | Ohio |
| Missouri | Tennessee |
| North Carolina | Texas |

Each State selected then provided data giving a geographic breakdown (usually by county or by school district) of the non-ESL, non-GED, non-institutional ABE enrollment within the State for October 1970 (or, as an alternative, for FY 1971). A serpentine geographic listing of programs was made within each State, the listing was cut into 6 segments of approximately equal enrollment size, and a program was randomly chosen from each segment.

Having thus drawn a sample of States and programs, it remained to select classes and students. For each program selected into the sample, the non-ESL, non-GED, non-institutional classes expected for November 1, 1971 were listed, along with the anticipated enrollment for each class. From among these, a random draw was made of up to three classes, chosen in such a way as to provide (on the average) a sample of approximately 25 students per program. Teachers later provided class rosters indicating which students should be excluded as being migrant or over 44 years old. The final sample included 92 programs, 206 classes, and 2,318 students.

C. REPLACEMENTS

One State declined to participate in the evaluation and was replaced by another State from the same cell in the sampling matrix. A few programs and classes were discovered, before data collection began, to fall outside the

scope of the study in spite of previous indications that they matched study criteria. In most of these cases, equivalent replacements were able to be randomly selected.

In the case of students, the sample was [illegible]ed to be large enough for replacements not to be required. The 2,318 students listed for the sample were retained without change, and information was gathered on as many of them as possible.

D. COMMENTS

Developing an adequate sample requires direct interaction between a sampling expert and well-organized data on the universe to be sampled. There are few sampling rules of general applicability. The experience of the present study suggests that trade-offs be carefully examined between the sampling precision required and the costs in time and effort which are needed to obtain additional pre-sampling data. In addition, whenever possible, large enough samples should be picked to avoid the need of selecting replacements for programs or individuals who cannot or do not wish to participate.

## V. CONTACTS, PERMISSIONS, AND ARRANGEMENTS

A large part of this study's effort was devoted to contacting regional, State, and local ABE program officials for information, for agreement to participate, and for making detailed arrangements for data collection. A prime consideration related to all of these contacts was the confidentiality of the information to be collected and analyzed during the study.

A. CONFIDENTIALITY

The study was designed as a national evaluation. Its sample was not designed in such a way as to make possible accurate regional, State, or local estimates. Accordingly, all ABE officials contacted were assured that no data restricted to a single program would be published.

Confidentiality of information on individual participants was also assured. Although student names and addresses had to be acquired in order to make possible longitudinal follow-ups, student data was filed on magnetic tape by code number only, not by name. At the conclusion of the project, all documents containing student names will be destroyed.

B. PERMISSIONS AND ARRANGEMENTS

Although most of the ABE officials contacted readily cooperated with study activities, there were a few exceptions which caused considerable difficulty. The exceptions were related to concerns about "too many evaluations here," or to insistence on reviewing and approving study plans in detail, or perhaps (and this is a matter of speculation) to a general reluctance to be evaluated.

Difficulties like this have to be handled on a case by case basis, using whatever is available in the way of influence or powers of persuasion. Face-to-face meetings are often helpful, since they tend to demonstrate that the evaluator is also a human being and that he intends no harm to the evaluatee. Extra copies of project planning documentation should also be available for distribution to help satisfy needs for information. Sufficient time should be allowed for these activities.

Since refusals to participate may damage the integrity of the sample, and since partial refusals (e.g., demands for omissions of all or part of a questionnaire) may result in seriously incomplete data, it is important, if possible, to obtain advance commitments from programs which are possible participants that they will cooperate with the evaluation if they are drawn into the sample. Programs might, for example, be required to furnish assurances when they apply for funds that they will cooperate with authorized evaluation activities.

## VI. ACHIEVEMENT TESTING

### A. TEST SELECTION

No existing test was discovered which was ideally suited to this study's needs. (Criteria of importance included content, format, existence of norms, acceptability to ABE students and staff, ease of administration, and cost.) After consideration of advantages and disadvantages of the various candidate tests, a battery was selected consisting of Tests 2 (Reading Comprehension) and 4(Arithmetic Fundamentals) from Level M of Tests of Adult Basic Education (TABE), published by CTB/McGraw-Hill.

Tests considered are listed and commented on below. The comments summarize the key considerations leading to selection of the TABE battery and rejection of the other possibilities. Tests which were still under development were not considered and are not listed below.

WRAT (Wide Range Achievement Test). This instrument is too brief to be used as a measure of improvement; only one form exists, so that pre-test and post-test instruments would be exactly the same; and the reading portion can be administered only to individual students, one at a time.

FAS (Fundamental Achievement Series). The adult orientation of this test appears superior to that of all others examined. However, it has only one form, it requires a tape or cassette player for administration, and no usable norms have been established.

ABLE (Adult Basic Learning Examination). The adult orientation of this test is superior to that of the TABE, and the test is at least equal to the TABE in most other important aspects except one. Its critical defect is that it is essentially unusable to measure improvements above the 5th grade level. Since about 40% of ABE students are at the 6th-8th grade level, this failing makes the ABLE unacceptable. (See reviews in Journal of Educational Measurement 5:271-274, 1968; and Journal of Counseling Psychology 16:278-280, 1969.)

ABE Student Survey, published by Follett Educational Corporation. Compares favorably with the TABE in all aspects except costs, which are approximately twice that of the TABE.

Durrell Listening-Reading. No arithmetic; not adult oriented.

Gray Oral Reading. No arithmetic; not adult oriented; not group administered.

SAT, MAT, CAT, ITBS (Stanford, Metropolitan, and California Achievement Tests; Iowa Tests of Basic Skills). These are widely-used tests for children, and they are sometimes used for adults. Their use for adults, however, is at least inappropriate and perhaps damaging. In addition, SAT, MAT, and CAT require from 4 to 5 different levels to cover grades 1-8 -- a logistic near-impossibility for our project. ITBS requires reading at least at the third grade level, and combines all levels into one complex and expensive booklet designed for reuse.

TABE. Advantages are an attempt (though not entirely successful) at adult orientation; a single level ("M" - Medium), which covers almost all grades of concern; availability in two equivalent forms, for pretest and post-test; grade-level norms; normed parts which can be used to keep test time under two hours; direct comparability to the MDTA-ABE evaluation study, which used the TABE; and reasonable price. Disadvantages include its being somewhat childish and school-oriented; in addition, its validity, reliability, and norms are "inherited" rather than independently established. Technically, this "inheritance" is a very serious defect. (See the review by S. Alan Cohen in Journal of Counseling Psychology 16:281, 1969.) Nevertheless, for this study it was superior to all other available tests.

The TABE has three levels ("E", Easy; "M", Medium; and "D", Difficult). Level E is suitable for grades 1 through 4; M for grades 2 through 9; and D for grades 3 through 12. Since Level M covers all grades of

interest to this study except 1.0-1.9. it is nearly satisfactory all by itself. Furthermore, administration of two levels to the same class is impractical under the circumstances imposed by this study; and the effort to isolate those classes where all students were at the 4th grade or below in both reading and arithmetic, so that Level E could be used, would be more trouble than it was worth. Finally, TABE Level E is the least successful of all levels in its attempted adult orientation. Therefore, only Level M was used.

Within Level M, Test 2 (Reading Comprehension, 42 min.) and Test 4 (Arithmetic Fundamentals, 50 min.) were used, as comprising the most reasonable minimum battery for basic skills.

B. TESTING PROCEDURES

The publisher's standardized procedures for the TABE were followed. IBM answer sheets were used and were machine scored. Since the publisher's Examiner's Manual covers more tests and a greater variety of circumstances than needed for this study, a modified manual was prepared, eliminating all unnecessary sections.

A brief explanation of the purpose of the tests was prepared, along with specific directions on timing, handling, and other procedural details. A draft version of these directions was successfully field-tested at several ABE classes in Maryland (not included in the study's sample) before the final version was prepared. (See Appendix B.)

Tests and instructions were distributed to local ABE program administrators, with requests to have classroom teachers or other qualified persons administer the tests according to the instructions provided. Tests were packaged for individual classes. Each package included a list of students to be tested, test booklets, answer sheets, and instructions. Extra booklets and answer sheets were provided in case students not in the study's designated sample might be present, and the teacher

did not want to exclude them from the testing experience. However, all answer sheets for students not in the sample were discarded. Only results for pre-designated students were used.

Tests were distributed for administration in January and May. Level M Form 1 was used in January, Level M Form 2 in May.

### C. COMMENTS

A great need exists for improved achievement testing instruments for ABE. Developmental efforts aimed toward new tests were underway at the time this study investigated available tests; however, none seemed close to completion. Future ABE evaluations should attempt to discover whether tests exist which are better adapted than the TABE to the objectives of the programs to be evaluated. If the TABE is still preferred, the experience of the MDTA-ABE study referred to above (2.V.I) suggests that a single level (e.g., level M alone) be used.

The interval between initial and final testing should be at least six months, if at all possible.

## VII. QUESTIONNAIRES

All questionnaires used are reproduced in Appendix C.

### A. DEVELOPMENT, PRE-TEST, AND APPROVAL

Interviews for three general types of respondents were developed:

- Students (three versions, for administration at three separate times)
- Program Administrators (two versions, for local and State administrators)
- Classroom Teachers

For student interviews, a comparatively short and simple form was developed, designed to concentrate on key issues, to be clear enough to elicit unambiguous responses, and to require no more than 20 minutes to administer. The interviews were concerned with demographic and educational backgrounds, with employment and income, and with educational desires. In addition, a great deal of information was sought to help in locating respondents for reinterviews.

Student interviews were pre-tested in sites in Pennsylvania not included in the study's sample. They were then thoroughly revised.

Partly as a result of pre-test experiences and partly on the basis of other experience (see B. S. Dohrenwend, "An Experimental Study of Payments to Respondents," Public Opinion Quarterly, Winter 1970-71, 34: 621-624), a plan to pay $5.00 to each post-program respondent was dropped. It appeared that a more effective use of funds would be to increase the efforts of interviewers to find respondents.

Interview forms for program administrators and teachers were less highly structured than were student forms. They were designed to collect, in interviewing periods no more than an hour in length, information on costs, staff qualifications, instructional goals and procedures, ways of identifying and responding to needs for ABE, and use of innovative procedures.

All interview forms were reviewed and approved by the U. S. Office of Education and the U. S. Office of Management and Budget.

## B. QUESTIONNAIRE DATA COLLECTION

Student interviews were conducted by experienced local interviewers employed by the Market Opinion Research organization of Detroit, Michigan, the study's subcontractor for student interviews. Market Opinion Research was assisted during part of the work by Grabo Research, Inc., also located in Detroit. Periods for these interviews were February-March, 1972, February-March, 1973, and July-August, 1973.

Interviewers were required to be able to communicate effectively with ABE enrollees in their localities. Since interviewers were already experienced in doing this type of work, they did not need training, as such; they did, however, attend orientation sessions during which this study's interviewing purposes and forms were thoroughly explained.

Initial student interviews were scheduled to coincide with ABE class meetings. Permission was obtained for enrollees to be individually excused from class for 20 minutes for this purpose. Interviewers returned to several class sessions, if necessary, to interview as many as possible of the students named on their lists of interviewees. Enrollees who were absent from class during these interviewing sessions were noted, and a sample of half of the absentees was specially sought out for interviews in homes or elsewhere. Two attempts were made to interview each member of this special sample.

During initial interviews, cooperation of enrollees was sought in providing information which would enhance the likelihood of finding them for follow-up interviews.

First follow-up student interviews took place a year after initial interviews. Attempts were made to obtain personal reinterviews with all students who had been initially interviewed. A 74% response rate was obtained, which is unusually high for a one-year follow-up of a disadvantaged population.

Second follow-up student interviews took place approximately 18 months after initial interviews. Reinterviews of all students interviewed during the first follow-up period were attempted. To reduce costs, second follow-up interviews were obtained by telephone whenever possible. If necessary, personal interviews were sought. A 79% completion rate was obtained (56% by phone, 23% in person).

Program administrators and teachers were interviewed by System Development Corporation professional staff members in February and March, 1972. Each of five interviewers covered the programs and classes in three States. A few interview schedules were missed, in which cases responses were obtained by mail or telephone. A 100% completion rate was obtained.

C. QUESTIONNAIRE PROCESSING

Structured portions of all questionnaires were edited, coded, and keypunched for computer processing. Narrative portions were analyzed and hand tabulated.

Processing of initial student interviews included particular attention to answers from enrollees who could not be interviewed at ABE class locations, either because they were temporarily absent or because they had stopped coming. Interviews with this group were obtained at students' homes or elsewhere away from class, and constitute about one-quarter of the total number of initial interviews.

To determine whether there were relationships between interview locations and responses to particular questions, special analyses were made. In only one instance (expected future attendance) were there distinct differences between respondents interviewed at the class location and those interviewed elsewhere. In all other instances analyzed, differences were negligible.

Figures illustrating these findings are presented below. With regard to expected future attendance, almost all (94%) of the students interviewed in class expected to attend most or all of the time in the future, whereas only a narrow majority (55%) of those interviewed elsewhere expected to attend frequently. Statistically, this relationship is highly significant (probability of occurring by chance less than .001).

| Expected Future Attendance by Interview Location | Percent of Total | Percent of Those Interviewed in Class | Percent of Those Interviewed Elsewhere |
|---|---|---|---|
| Will attend most or all of time | | | |
| Interviewed in Class | 71% | 94% | -- |
| Interviewed Elsewhere | 14% | -- | 55% |
| Will attend little or none of time | | | |
| Interviewed in Class | 4% | 6% | -- |
| Interviewed Elsewhere | 11% | -- | 45% |

As an example of no difference between the two groups, percentages are given for opinions on the type of building acceptable tc ABE students. Only about 8%, whether interviewed in class or out of class, believe people they know would object to attending ABE classes in an elementary or high school building.

| Opinion on Type of Building by Interview Location | Percent of Total | Percent of Those Interviewed in Class | Percent of Those Interviewed Elsewhere |
|---|---|---|---|
| No Objection to School Building | | | |
| Interviewed in Class | 70% | 92% | -- |
| Interviewed out of Class | 22% | -- | 92% |
| Objection to School Building | | | |
| Interviewed in Class | 6% | 8% | -- |
| Interviewed out of Class | 2% | -- | 8% |

D. COMMENTS

Most interviewees seemed very willing to cooperate by spending time with interviewers and answering the questions that were asked. There were exceptions, of course, but they were comparatively few. Among students, positive interest in being interviewed was much more often expressed than reluctance.

In a longitudinal study designed to determine benefits from ABE, questionnaires should first be administered as close to initial enrollment in ABE as possible and then at least once -- preferably more than once -- after termination of ABE attendance. Since in most programs students begin and end their ABE attendance at many different times, consideration should be given to making the initial questionnaire a part of the enrollment process for the sample of students to be studied.

The experience of the present evaluation suggests that a second post-program interview is a useful supplement, for the most part in confirming trends established by the first follow-up questionnaire. In addition, a second follow-up interview provides an opportunity for further exploration of matters remaining uncertain after the first follow-up. See Appendix C, page C-58, for an example.

In view of the fact that this study was unable to discover any firm causal relations between program characteristics and effects on students, the possibility is suggested that the questionnaires contained the wrong questions, or else that the causal relations under study are too complex to be amenable to a survey-type investigation based on data collected through questionnaires. This latter alternative raises one more question to which the present study is unable to give a definitive answer. It may be, however, that what is required is an alternative or supplemental methodology which would focus on a few exemplary local ABE programs, evaluating and at the same time endeavoring to improve each one of them by an effort sustained over a period of several years. In this type of situation, there would be much greater opportunities both for programs to achieve success, and for evaluation to pinpoint the factors leading to success.

## VIII. ATTENDANCE DATA

Attendance figures on students in the sample were collected both from teachers and from students. Students were asked in various interviews about the month and year in which they first began attending ABE; they were also asked to specify those months over the period September 1971 - June 1973 during which they had attended basic education class at least once.

Teachers were requested to fill out, at the end of the school year or after June 30, 1972 (whichever happened earlier), an attendance summary which showed the number of times each student attended class each month, starting with November 1971. This attendance summary was given to teachers when they were interviewed. Follow-up letters were sent to non-respondents during the summer of 1972. Eventually, attendance summaries for almost all classes were received; however, not all forms were complete. Usable data on 1840 students were actually obtained.

Attendance data of particular interest were those bearing on the number of class hours attended between the two test sessions. However, since attendance was reported only in number of sessions per month, there was no way of calculating the exact number of sessions between a first test at one date in one month and a second test at another date in another month. For uniformity in estimating time between tests, it was assumed that all tests were given during the first class session of the month. This assumption produces an approximately correct estimate

for cases in which tests are given at about the same time of each month. In other cases, the estimate may be either too high or too low, but errors should balance out on the average.

Other evaluations, whenever possible, should arrange to collect more detailed attendance information on individual students. Since many classes prepare this information routinely, advance arrangements could be made to obtain copies.

## IX. DATA COUNTS

Counts related to the principal data collection stages of this study are provided in Table 3-1. Comments on the counts are contained in the following paragraphs.

All 50 States were successfully canvassed by telephone for estimates of the numbers of students enrolled in ESL classes. This step was necessary before the study's sample could be drawn. ESL classes were not included in the study's scope, and data on numbers of students in these classes were not available from any single source.

Sixteen States were included in the study's final sample. However, as explained in the discussion of sampling in a previous section, one State was included as a double; data on twice the normal numbers of students and programs were sought from this double State. The sample therefore consisted of 15 separate States treated as 16.

An effort was made to select 6 programs into the sample from each of 16 States, for a total of 96. Because of last minute discoveries that some programs did not meet study inclusion criteria, only 92 programs were obtained. Since programs were selected by a random draw method which gave each ABE student in the State an equal probability of being in the final sample, several of the proportionally larger programs were drawn into the sample more than once. One program was drawn three times; nine were drawn twice. In these cases, data on twice or three times the normal numbers of students and classes were sought from each program. The sample therefore consisted of 81 separate programs treated as 92.

The number of students sought for the final sample was approximately 25 per program (for 92 programs, 2300 students). It was estimated that an attempt to select 40 students per program would result in an average of 25 per program after allowing for small programs and for students outside the scope of the study. One, two, or three classes were selected from each program, as needed to obtain either 40 students or all students in the program, whichever was smaller. The result was 206 classes enrolling 3,324 students (about 36 students per program). After excluding students over 44 and migrants, 2,318 students remained for the final sample, a number very close to that desired.

Table 3-1. Data Counts

| | |
|---|---|
| States canvassed for estimates of numbers of students enrolled in ESL classes | 50 |
| States in final sample | 16 |
| State director interviews completed | 16 |
| Local programs in final sample | 92 |
| Local program director interviews completed | 92 |
| Classes in final sample | 206 |
| Classroom teacher interviews completed | 206 |
| Students listed as enrolled on 11/15/71 in classes in sample | 3,324 |
| Students in final sample | 2,318 |
| Students taking initial tests | 1,108 |
| Students taking final tests | 578 |
| Students taking both tests | 441 |
| Students taking one or both tests | 1,245 |
| Students initially interviewed (February-March, 1972) | 1,448 |
| Students reinterviewed, first follow-up (February-March, 1973) | 1,065 |
| Students reinterviewed, second follow-up (July-August, 1973) | 844 |
| Students for whom attendance data was reported by teachers | 1,840 |

The numbers of students on which test data were obtained were:

| | | |
|---|---|---|
| Initial Tests | January | 800 |
| | February | 215 |
| | Late tests | 93 |
| | Total | 1,108 |
| Second Tests | April | 3 |
| | May | 511 |
| | Late tests | 64 |
| | Total | 578 |

Students who took both tests numbered 441. This number was large enough for reasonably accurate estimates of gains between tests for all students and for major subpopulations. It was not large enough, however, for some of the more detailed analyses desired.

Suggestions to be considered for obtaining a larger number of students tested twice would be first, that initial tests be given immediately after drawing the sample, and second, that systematic provisions for make-up testing of absentees be included. Another possibility would be to establish a large provisional sample and let the actual sample be determined by students for whom initial test scores can be obtained. This last possibility, however, would not be entirely desirable for evaluations needing an unbiased sample of all enrollees (whether or not they can be tested).

Student interview rates obtained during this study were generally quite satisfactory; follow-up interview rates were surprisingly high. Initial interviews obtained totalled 1,448 -- 1,092 at the class location, 356 at the student's home or elsewhere away from the class. Thus of the total sample of 2,318, 47% were interviewed in class and 15% away from class. Since the out-of-class interviews were done on a skip pattern which automatically eliminated half of the names remaining after in-class interviews, the out-of-class interviews represented the equivalent of twice their number. The obtained response rate was thus 47% + 2 x 15% = 77%.

First follow-up interviews were obtained from 74% of the students who had been initially interviewed. Second follow-up interviews were obtained from 79% of the first follow-up group.

## X. SUPPLEMENTARY DATA

### A. GENERAL COMMENTS

In addition to data collected especially for this study, several types of existing data were pertinent. They included Adult Basic Education Program Statistics, as prepared by the National Center for Educational Statistics, and a recently concluded study of ABE enrollees within Manpower Development and Training Act programs (see Sections 3.IV.A and 2.V.I, above). In addition, this study made some use of 1970 Census Data and of national data on income for various types of occupations. Census data were used in an attempt to shed light on factors related to program success (Section 2.X); national income data were used for comparisons with enrollee wage gains (Section 2.IV.C).

Many sources of supplementary data can be useful for program evaluation, but judgment needs to be exercised as to the proportion of available effort devoted to each source. In the case of the present study, the supplementary sources considered all showed at least some lack of comparability with the study's data requirements. For example, the most useful census data discovered were those at the county level. However, since ABE students represent only a small fraction of county residents (or may even come from outside of the county), county data are only loosely applicable to ABE program activities.

In general, the data most needed for a longitudinal study of ABE are those collected directly from or about the individual students being studied. Supplementary information can be useful, within limits; it should be focused as closely as possible on individuals similar to ABE students in demographic, social, educational, and economic characteristics.

B. CENSUS DATA

The 1970 census data referred to above were tabulated for all counties in which the ABE programs sampled for this study were located. Three county variables were selected: median school years completed by persons under 25, percent of civilian labor force unemployed, and percent of families with income below poverty level. In a few cases where a program in the sample was located in two counties, that county was selected which bore the greatest resemblance to the town or place in which the program was located.

As the tabulations below show, the ABE programs sampled occur in counties showing considerable diversity with respect to these three variables.

| Median School Years Completed in the County, for Persons Under 25 | Percent of Counties in the Sample | Cumulative Percent |
|---|---|---|
| 8.2 - 8.9 | 7.8 | 7.8 |
| 9.0 - 9.9 | 15.0 | 22.8 |
| 10.0 - 10.9 | 9.2 | 32.0 |
| 11.0 - 11.9 | 16.5 | 48.5 |
| 12.0 - 12.2 | 27.7 | 76.2 |
| 12.3 - 12.4 | 11.7 | 87.9 |
| 12.5 - 12.7 | 12.1 | 100.0 |

Mean 11.3; Median 12.0; Range 8.2-12.7

| Percent of Civilian Labor Force Unemployed in the County | Percent of Counties in the Sample | Cumulative Percent |
|---|---|---|
| 1.8 - 2.9 | 13.6 | 13.6 |
| 3.0 - 3.9 | 35.4 | 49.0 |
| 4.0 - 4.9 | 21.4 | 70.4 |
| 5.0 - 5.9 | 10.2 | 80.6 |
| 6.0 - 6.9 | 9.7 | 90.3 |
| 7.0 - 9.6 | 9.7 | 100.0 |

Mean 4.5; Median 4.0; Range 1.8-9.6

| Percent of Families in County with Income Below Poverty Level | Percent of Counties in the Sample | Cumulative Percent |
|---|---|---|
| 3.4 - 4.9 | 11.7 | 11.7 |
| 5.0 - 6.9 | 9.7 | 21.4 |
| 7.0 - 8.9 | 16.9 | 38.3 |
| 9.0 - 10.9 | 7.3 | 45.6 |
| 11.0 - 12.9 | 6.8 | 52.4 |
| 13.0 - 14.9 | 11.2 | 63.6 |
| 15.0 - 16.9 | 12.1 | 75.7 |
| 17.0 - 24.9 | 10.7 | 86.4 |
| 25.0 - 49.9 | 13.6 | 100.0 |

Mean 14.8; Median 12.0; Range 3.4-49.9

## XI. ANALYSIS AND REPORTING

### A. DATA ANALYSIS

Two sets of computer programs were used to carry out the study's statistical analyses -- SPSS (Statistical Package for the Social Sciences) and BMD (Biomedical program package).

SPSS, developed at Stanford University, is an integrated system of subprograms which readily permits saving data, labelling variables, merging data files, etc., as well as selecting desired sequences of statistical analyses. The SPSS subprograms CODEBOOK and CROSSTABS provided one-and two-way frequency distributions, respectively, of ABE program variables. The characteristics of each distribution could be examined as well as the pattern of cross-tabulated interrelationships between the values of one variable and those of a second variable. Appropriate summary statistics (means, percentages, cumulative frequencies, etc.) were provided by these subprograms. Other more elaborate analyses in the SPSS package permitted the use of stepwise multiple linear regression to explain and predict relationships among a set of variables. Subprogram REGRESSION selected the "best" subset of variables (out of all available) which was related to a single outcome or dependent variable. As an option, a matrix of correlation coefficients between pairs of predictor variables also was provided (among other analytic options) to help pinpoint interrelationships.

One other SPSS analytic subprogram was used. Subprogram BREAKDOWN provided the facility to (a) compare means, standard deviations and variances of a single outcome variable among subgroups of a sample or population and (b) determine if group differences are present via a one-way analysis of variance technique.

The BMD package, developed by the UCLA Health Sciences Computing Facility, possesses less data handling capability than SPSS but provides certain multivariate techniques and thereby, a greater analytic sophistication. Thus program BMD07M, Stepwise Multiple Linear Discriminant Function Analysis for several groups, served to identify that subset of predictors which best distinguished individuals with high gains on outcome variables from those with low gains. The proportion of individuals who were correctly classified into their respective high-or low-gain groupings served as a summary statistic for evaluating the predictive effectiveness of variables.

Analyses of data based on initial student interviews involved application of weights to correct for unequal sizes of samples from States. This was accomplished by averaging, for each questionnaire item, the responses obtained for each of the 16 States. Corrected values obtained in this manner turned out to be extremely close to uncorrected averages. Since the procedure was time-consuming and apparently unnecessary, it was dropped and not used for analyses of other study data.

In order to determine the values of certain constructed variables (e.g., totals over a period of months), and for handling some cross-file composites, a limited amount of special computer programming was required, in addition to the use of SPSS and BMD.

All data processed by computer during this study are stored in coded form on a data tape described in Appendix G.

B. REPORTS

Regular monthly status reports and quarterly technical progress reports have been provided to the U. S. Office of Education throughout the study. In addition, two interim reports were published and distributed to make available early results:

- Data on Selected Students in Adult Basic Education Programs, 1971-72; a Preliminary Report from an Ongoing Longitudinal Study, September, 1972.
- Test Data on Adult Basic Education Students, December, 1972.

All of the information contained in these interim reports has been incorporated in this final report, in some cases with minor corrections.

## SECTION 4 - APPENDIXES

Appendixes A through G, which follow, contain technical details of interest to specialized readers.

## APPENDIX A - DETAILS OF THE SAMPLING PLAN

An overview of the sampling plan for this study is given in Section 3.IV above. This appendix provides additional details.

Table A-1 contains estimates for 1970 of ABE students in fifty States, by Office of Education region. As the table shows, approximately 18% of all ABE students were in ESL programs (English as a Second Language), 12% were in institutions (e.g., hospitals or prisons), 23% were 45 and over, and 2% were migrant. All of these types of students were excluded from the study -- a total of 46%. This left a remainder to be sampled of about 54% of the whole, or nearly 280,000 students.

The computations for percents and totals to be sampled in Table A-1 were made as follows:

$$P_S^* = \text{Percent to be sampled (States)} = 100 \left(\frac{T-E}{T}\right)\left(\frac{T-I}{T}\right)\left(\frac{T-A}{T}\right)\left(\frac{T-M}{T}\right)$$

$$T_S^* = \text{Total to be sampled (States)} = T \times P_S^*/100$$

$$T_R^* = \text{Total to be sampled (Region)} = \Sigma T_S^* \text{ (States in Region)}$$

$$P_R^* = \text{Percent to be sampled (Region)} = 100 T_R^*/T,$$

where

T = ABE Total,
E = Estimated ESL Students,
I = Students in Institutions,
A = Students 45 and Over, and
M = Migrant Students.

Estimates of $T_S^*$ from Table A-1 were used as measure of size data to classify the fifty States into an 8 x 8 square matrix representing a two-way stratification scheme. Geography and percent of black ABE students were the factors establishing

Table A-1. Estimates for 1970 of ABE Students in Fifty States, by Region

| Region and State | ABE Total | Estimated ESL Students | Students in Institutions | Students 45 and Over | Migrant Students | Percent to be Sampled | Total to be Sampled |
|---|---|---|---|---|---|---|---|
| Region I | 31,451 | 12,036 | 4,089 | 5,207 | 139 | 45.1 | 14,171 |
| Connecticut | 9,689 | 2,800 | 1,069 | 1,581 | 0 | 53.0 | 5,132 |
| Maine | 1,613 | 700 | 16 | 445 | 43 | 39.5 | 637 |
| Massachusetts | 14,220 | 7,110 | 1,623 | 2,188 | 51 | 37.3 | 5,308 |
| New Hampshire | 1,263 | 505 | 1,263 | 272 | 45 | 0 | 0 |
| Rhode Island | 2,280 | 570 | 111 | 383 | 0 | 59.4 | 1,353 |
| Vermont | 2,386 | 351 | 7 | 338 | 0 | 73.0 | 1,741 |
| Region II | 31,933 | 9,890 | 1,325 | 5,843 | 363 | 53.5 | 17,098 |
| New Jersey | 11,413 | 6,000 | 824 | 1,861 | 205 | 36.2 | 4,127 |
| New York | 20,520 | 3,890 | 501 | 3,982 | 158 | 63.2 | 12,971 |
| Region III | 42,764 | 2,102 | 7,691 | 8,440 | 109 | 62.0 | 26,500 |
| Delaware | 1,264 | 55 | 1,264 | 155 | 9 | 0 | 0 |
| Maryland | 6,758 | 935 | 822 | 1,461 | 3 | 59.3 | 4,010 |
| Pennsylvania | 14,657 | 862 | 4,410 | 2,192 | 36 | 55.8 | 8,179 |
| Virginia | 9,750 | 0 | 742 | 2,263 | 61 | 70.5 | 6,876 |
| West Virginia | 10,335 | 250 | 453 | 2,369 | 0 | 71.9 | 7,435 |
| Region IV | 134,399 | 5,509 | 14,561 | 34,392 | 1,097 | 64.3 | 86,433 |
| Alabama | 11,222 | 0 | 873 | 4,509 | 0 | 55.1 | 6,188 |
| Florida | 24,092 | 5,150 | 6,420 | 8,138 | 1069 | 36.5 | 8,796 |
| Georgia | 19,317 | 0 | 3,088 | 4,602 | 9 | 64.0 | 12,365 |
| Kentucky | 14,092 | 56 | 588 | 2,528 | 0 | 78.3 | 11,040 |
| Mississippi | 11,083 | 40 | 26 | 2,740 | 0 | 74.9 | 8,296 |
| North Carolina | 26,398 | 0 | 1,873 | 3,961 | 0 | 79.0 | 20,847 |
| South Carolina | 13,848 | 103 | 1,287 | 4,154 | 19 | 63.0 | 8,723 |
| Tennessee | 14,347 | 160 | 406 | 3,760 | 0 | 70.9 | 10,178 |

Table A-1. (Continued)

| Region and State | ABE Total | Estimated ESL Students | Students in Institutions | Students 45 and Over | Migrant Students | Percent to be Sampled | Total to be Sampled |
|---|---|---|---|---|---|---|---|
| Region V | 70,950 | 8,242 | 14,704 | 15,390 | 1,754 | 54.3 | 38,550 |
| Illinois | 25,719 | 2,345 | 5,142 | 5,658 | 548 | 55.5 | 14,282 |
| Indiana | 6,367 | 0 | 1,281 | 860 | 81 | 68.2 | 4,344 |
| Michigan | 15,409 | 3,852 | 5,551 | 4,243 | 520 | 33.6 | 5,182 |
| Minnesota | 2,752 | 0 | 219 | 440 | 39 | 76.2 | 2,097 |
| Ohio | 16,613 | 1,045 | 2,360 | 3,709 | 95 | 62.1 | 10,318 |
| Wisconsin | 4,090 | 1,000 | 151 | 480 | 471 | 56.9 | 2,327 |
| Region VI | 88,181 | 10,601 | 12,248 | 26,416 | 3,320 | 51.6 | 45,527 |
| Arkansas | 5,973 | 25 | 672 | 2,025 | 60 | 57.8 | 3,454 |
| Louisiana | 15,539 | 225 | 260 | 4,722 | 0 | 67.5 | 10,483 |
| New Mexico | 4,248 | 939 | 482 | 1,150 | 1,047 | 38.0 | 1,613 |
| Oklahoma | 9,310 | 412 | 1,114 | 1,591 | 200 | 68.2 | 6,353 |
| Texas | 53,111 | 9,000 | 9,720 | 16,928 | 2,013 | 44.5 | 23,624 |
| Region VII | 23,049 | 1,574 | 1,594 | 4,431 | 353 | 70.7 | 16,298 |
| Iowa | 8,476 | 48 | 135 | 983 | 14 | 86.3 | 7,314 |
| Kansas | 2,968 | 983 | 155 | 1,394 | 278 | 30.5 | 904 |
| Missouri | 9,760 | 125 | 1,028 | 1,588 | 61 | 73.5 | 7,174 |
| Nebraska | 1,845 | 418 | 276 | 466 | 0 | 49.1 | 906 |
| Region VIII | 9,647 | 1,129 | 959 | 1,636 | 180 | 64.6 | 6,235 |
| Colorado | 4,195 | 450 | 85 | 722 | 78 | 71.1 | 2,982 |
| Montana | 858 | 60 | 538 | 113 | 58 | 28.1 | 241 |
| North Dakota | 874 | 0 | 30 | 189 | 10 | 74.9 | 655 |
| South Dakota | 1,412 | 27 | 119 | 250 | 3 | 73.8 | 1,042 |
| Utah | 1,396 | 222 | 92 | 228 | 16 | 65.0 | 908 |
| Wyoming | 912 | 370 | 95 | 134 | 15 | 44.7 | 407 |
| Region IX | 68,271 | 40,635 | 644 | 15,661 | 1,282 | 30.6 | 20,893 |
| Arizona | 4,033 | 2,531 | 9 | 766 | 113 | 29.2 | 1,179 |
| California | 55,111 | 31,996 | 0 | 11,024 | 881 | 33.0 | 18,176 |
| Hawaii | 7,849 | 5,233 | 542 | 3,664 | 4 | 16.5 | 1,295 |
| Nevada | 1,278 | 875 | 93 | 207 | 284 | 19.0 | 243 |

Table A-1. (Continued)

| Region and State | ABE Total | Estimated ESL Students | Students in Institutions | Students 45 and Over | Migrant Students | Percent to be Sampled | Total to be Sampled |
|---|---|---|---|---|---|---|---|
| Region X | 11,624 | 1,120 | 1,918 | 1,629 | 613 | 61.6 | 7,162 |
| Alaska | 1,266 | 0 | 56 | 161 | 0 | 83.5 | 1,057 |
| Idaho | 2,446 | 242 | 222 | 297 | 202 | 66.0 | 1,615 |
| Oregon | 3,576 | 533 | 469 | 514 | 158 | 60.5 | 2,164 |
| Washington | 4,336 | 345 | 1,171 | 657 | 253 | 53.7 | 2,326 |
| TOTAL - All Regions | 512,269 | 92,838 | 59,733 | 119,045 | 9,210 | 54.4 | 278,867 |
| Percent of Total All Regions | 100.0 | 18.1 | 11.7 | 23.2 | 1.8 | -- | 54.4 |

the two dimensions of stratification. In the matrix, the 8 sums along each of the two margins were made as equal in measure of size as conveniently possible.

Tables A-2, A-3, and A-4 portray the resulting matrix in various ways. Table A-2 places each State in its appropriate cell. The numbers following each State's abbreviation are first, percent black (in parentheses) and second, measure of size (in thousands). Table A-3 shows cell, row, and column totals for the measures of size given in Table A-2.

Table A-4 gives the cell, row, and column probabilities which are proportional to the measures of size. These probabilities represent the expected number of States to be selected with a probability scheme assuming that cells will be chosen with a probability proportional to size while being constrained to the cell and margin numbers.* (For example, 1.7 is interpreted that this cell, or margin, is to appear in the sample at least once and that there is a probability of 0.7 that it will appear twice.) The desired row and column totals of 2.0 indicate the intention to draw two cells (or one double cell) per row and per column.

Feasible samples of cells were constructed. Only the first three were sufficiently balanced. They yielded a total draw probability of 0.74 (.35 + .23 + .16), and sample number 3 was drawn.

This procedure selected the sample of cells. Where selected cells contained two or more States, a further draw was made with probability proportional to size. Any State with a measure of size greater than 17,500 came into the sample with certainty once; the remainder over 17,500 entered the draw for a second selection.

---

* R. J. Jessen, 1969. "Some Methods of Probability Non-Replacement Sampling," J. Am. Stat. Assn., 64:175-193.

R. J. Jessen, 1970. "Probability Sampling With Marginal Constraints," ibid., 65:776-796.

Table A-2. Matrix of ABE Students in Fifty States

| Geographical Area | Percent Black | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 (0-13) | 2 (14-21) | 3 (21-31) | 4 (32-41) | 5 (42-51) | 6 (52-61) | 7 (61-65) | 8 (66-74) |
| 1 | NH (0) 0<br>VT (0) 1.7<br>ME (1) 0.6<br>MA (9) 5.3<br>RI (10) 1.4 | CT (16) 6.1 | NJ (26) 4.1 | NY (36) 13.0 | MD (47) 4.0 | | | DE (74) 0.0 |
| 2 | | | | IN (40) 4.3<br>MI (40) 5.2<br>PA (41) 8.2 | | OH (54) 10.3 | | WV (70) 7.4 |
| 3 | | | | | FL (63) 8.8 | GA (61) 12.4 | | AL (71) 6.2<br>MS (73) 8.3 |
| 4 | | | | | VA (50) 6.9 | | NC (65) 20.8 | SC (69) 8.7 |
| 5 | | KY (22) 11.0 | | | TN (48) 10.2 | | LA (61) 10.5 | AR (70) 3.5 |
| 6 | NM (3) 1.6<br>AZ (10) 1.2 | | OK (21) 6.4<br>KS (31) 0.9<br>TX (31) 23.6 | | | | | |
| 7 | IA (-) 7.3<br>ND (1) 0.7<br>SD (1) 1.0<br>MN (13) 2.1 | | NB (28) 0.9<br>WI (30) 2.3 | | MO (44) 7.2 | IL (52) 14.3 | | |
| 8 | OR (13) 2.2<br>MT (-) 0.2<br>WA (12) 2.3<br>HI (0) 1.3<br>ID (2) 1.6<br>UT (3) 0.9<br>WY (9) 0.4<br>AK (12) 1.1 | CA (10) 18.2<br>NV (15) 0.2<br>CO (18) 3.0 | | | | | | |

Table A-3. Measures of Size for the Sampling Matrix

| Geo. Area | Percent Black 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Total | Number of Cells |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9.0 | 6.1 | 4.1 | 13.0 | 4.0 | | | 0.0 | 36.2 | 6 |
| 2 | | | | 17.7 | | 10.3 | | 7.4 | 35.4 | 3 |
| 3 | | | | | 8.8 | 12.4 | | 14.5 | 35.7 | 3 |
| 4 | | | | | 6.9 | | 20.8 | 8.7 | 36.4 | 3 |
| 5 | | 11.0 | | | 10.2 | | 10.5 | 3.5 | 35.2 | 4 |
| 6 | 2.8 | | 30.9 | | | | | | 33.7 | 2 |
| 7 | 11.1 | | 3.2 | | 7.2 | 14.3 | | | 35.8 | 4 |
| 8 | 10.0 | 21.4 | | | | | | | 31.4 | 2 |
| Total | 32.9 | 38.5 | 38.2 | 30.7 | 37.1 | 37.0 | 31.3 | 34.1 | 279.8 | 27 |

Table A-4. Probabilities Proportional to Size

| Geo. Area | Percent Black 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Desired Total | Actual Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .51 | 35 | .23 | .74 | .23 | | | .00 | 2.0 | 2.06 |
| 2 | | | | 1.00* | | .59 | | .42 | 2.0 | 2.01 |
| 3 | | | | | .50 | .71 | | .83 | 2.0 | 2.04 |
| 4 | | | | | .39 | | 1.19* | .50 | 2.0 | 2.08 |
| 5 | | .63 | | | .58 | | .60 | .20 | 2.0 | 2.01 |
| 6 | .16 | | 1.77* | | | | | | 2.0 | 1.93 |
| 7 | .63 | | .18 | | .41 | .81 | | | 2.0 | 2.03 |
| 8 | .58 | 1.22* | | | | | | | 2.0 | 1.80 |
| Desired total | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 16.0 | |
| Actual total | 1.88 | 2.20 | 2.18 | 1.74 | 2.11 | 2.11 | 1.79 | 1.95 | | 15.96 |

* Probability of at least 1.0 that this cell will be drawn at least once (see text).

In order to provide an estimate of overall sampling variance, the sample was split into two parts, each containing a State representing a row and a column. Table A-5 presents the splitting scheme and Table A-6 the composition of each sample half. Note that North Carolina appears in both samples.

Table A-7 presents enrollment, measure of size (MOS), and class data for the States selected. The total MOS for the States selected is 143,876, representing 51.6% of the MOS of all 50 States.

Table A-5. Sample Splitting Scheme

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1 | A | | | B | | | | |
| 2 | | | | A | | B | | |
| 3 | | | | | | A | | B |
| 4 | | | | | | | BA | |
| 5 | | | | | B | | | A |
| 6 | | | BA | | | | | |
| 7 | B | | | | A | | | |
| 8 | | AB | | | | | | |

Table A-6. Composition of Sample Halves

| Sample A | | Sample B | |
|---|---|---|---|
| Mass. (9) - 5.3 | | New York (36) - 13.0 | |
| Mich. (40) - 5.2 | | Ohio (34) - 10.3 | |
| Georgia (61) - 12.4 | | Miss. (73) - 8.3 | |
| N. Carolina (65) - 20.8 | | N. Carolina (65) - 20.8 | |
| Arkansas (70) - 3.5 | | Tenn. (48) - 10.2 | |
| Kansas (31) - 0.9 | | Texas (31) - 23.6 | |
| Missouri (44) - 7.2 | | Minnesota (13) - 91.3 | |
| California (10) - 18.2 | | Colorado (18) - 3.0 | |
| Total | 73.5 | Total | 91.3 |

Table A-7. 1970 Data on States Selected for Sample

| Region | State | Measure of Size | Total ABE Enrollment | Total Classes | Av. Class Size |
|---|---|---|---|---|---|
| 1 | Mass. | 5,308 | 14,220 | 714 | 19.9 |
| 2 | N. Y. | 12,971 | 20,520 | 1,269 | 16.2 |
| 4 | Georgia | 12,365 | 19,317 | 837 | 23.1 |
| 4 | Miss. | 8,296 | 11,083 | 523 | 21.2 |
| 4 | N. C. | 20,847 | 26,398 | 1,760 | 15.0 |
| 4 | Tenn. | 10,178 | 14,347 | 937 | 15.3 |
| 5 | Michigan | 5,182 | 15,409 | 715 | 21.6 |
| 5 | Minnesota | 2,097 | 2,752 | 112 | 24.6 |
| 5 | Ohio | 10,318 | 16,613 | 1,852 | 9.0 |
| 6 | Arkansas | 3,454 | 5,973 | 373 | 16.0 |
| 6 | Texas | 23,624 | 53,111 | 2,357 | 22.5 |
| 7 | Kansas | 904 | 2,968 | 155 | 19.1 |
| 7 | Missouri | 7,174 | 9,760 | 308 | 31.7 |
| 8 | Colorado | 2,982 | 4,195 | 315 | 13.3 |
| 9 | California | 18,176 | 55,111 | 938 | 58.8 |
| 15 | State Total | 143,876 | 271,777 | 13,165 | 20.6 |
| 50 | State Total | 278,867 | 512,269 | 29,313 | 17.5 |
| 15 | State Percentage of total | 51.6% | 53.1% | 44.9% | -- |

## APPENDIX B - INSTRUCTIONS FOR ADMINISTERING TESTS

The instructions used for administering tests were to a large extent extracted from the Examiner's Manual supplied by the test publisher. CTB/McGraw-Hill kindly gave permission for portions of the manual to be specially reproduced for this study, so that test administrators would not be confused by those parts of the instructions which were not applicable to the sections and forms of the tests actually being used.

This appendix contains copies of additional materials used to assist the test administration process, as follows:

- Test Material Transmittal Letter. Mailed to local program directors along with materials needed for testing.
- ABE Testing Package - Cover Sheet. Shipping list and overview of instructions for test administrators.
- Directions for Administering Tests. Non-copyright portions of the detailed instructions for test administration.

TEST MATERIAL TRANSMITTAL LETTER

SDC SYSTEM DEVELOPMENT CORPORATION
5827 Columbia Pike, Falls Church, Virginia 22041

The U.S. Office of Education's national study of Adult Basic Education is now ready, with your assistance, to move into its next phase. January 1972, has been designated as testing month. We also hope to begin student and staff interviews during January.

The Class Locator and Roster Forms which we sent you earlier have been completed and returned to us. The information thus provided has enabled us to select specific students for testing and interviewing.

As you know, we are arranging for visits to classes to interview students and staff members. However, we are requesting that the testing phase of the project be accomplished by your own teachers or other staff members, without visits from us. We believe that tests are best administered, if possible, by teachers or counselors known to the students.

Enclosed herewith are test materials, packaged individually for the participating classes from your program. Each package is labelled with a cover sheet to show the class it is to be used for; the cover sheet also lists the contents of the package and summarizes testing needs and procedures. Inside each package is a list of the specific students selected for participation in the study, along with test booklets, answer sheets, and complete directions for administering tests.

Because your name was given to us as the local contact for your ABE program, we are requesting that you designate a test administrator for each class and distribute the enclosed testing packages to the appropriate persons. For purposes of national standardization, tests are to be given as soon as possible after their receipt.



A-3064 (3/71)

After testing, completed answer sheets are to be mailed to us in the prepaid envelopes we are furnishing. We are asking that other testing materials (booklets, etc.) be returned to you. If you have use for them and can safeguard them so that they will not fall into unauthorized hands, you may keep them. Otherwise, they should be destroyed.

We are most grateful to you for your continuing assistance in this nation-wide project. If you have any questions at all, please let us know.

Sincerely yours,

William P. Kent, Ph.D.
Project Director

WPK:br
Enc.

ABE TESTING PACKAGE - COVER SHEET

TO:

This package contains testing materials for use in connection with the United States Office of Education's nationwide study of Adult Basic Education. A list of ____ students is enclosed, selected from the following class:

_____

_____

Please arrange to have these students tested, following the directions and using the materials in the package. The entire package, including this cover sheet, should be given to the person who will be administering the tests.

Contents of this package:

List of students to be tested

Directions for administering tests

_____ test booklets

_____ reading answer sheets

_____ arithmetic answer sheets

Two prepaid envelopes for mailing completed answer sheets

Testing needs (in addition to the contents of this package):

- About two hours of class time.
- A watch or clock with a second hand, to time test sections.
- Pencils (No. 2, with attached eraser) for all students, plus extras.
- One sheet of scratch paper for each student.

To the teacher or counselor administering tests

The enclosed Directions explain the procedures to be used and their purpose. It is important to this nationwide study that these procedures be followed. They have been simplified, to make them as easy as possible for you. We very much appreciate your help.

Before testing, you should:

1. Carefully look over the Directions for Administering Tests, a test booklet, and the answer sheets to make sure that you understand the procedures you will be following.
2. Check the contents of this package and the list of needs above. Do you have everything you need?
3. If you have any questions, ask your ABE Supervisor.

System Development Corporation, 5827 Columbia Pike, Falls Church, Virginia 22041

## DIRECTIONS FOR ADMINISTERING TESTS

### Purpose of Tests

The United States Office of Education is sponsoring a nationwide study of Adult Basic Education. This study is based on collecting information by means of tests and interviews at a scientifically selected sample of approximately 100 locations. Each location is represented in the sample by one or more classes.

In order to get standardized information on a nationwide basis, the Office of Education requests your assistance in administering portions of Tests of Adult Basic Education (TABE) as described below. It is recognized that these tests may interrupt your planned schedule of classes, and that you may recently have tested many of your students. However, only by giving the same tests to all students in the same way, can adequate information be derived for a national study. No such study has previously been undertaken. Its results will be important to all persons concerned with improving Adult Basic Education.

### When and What Students to Test

Tests are to be given as soon as possible after their receipt. By means of statistical sampling procedures, certain students have been selected for participation in tests and interviews. Their names are given on the list of Students to Be Tested. Testing of all students listed is desired. Other students need not be tested. However, if you wish to include other students in the testing activity, you may do so. Extra test booklets and answer sheets are provided for this purpose.

If some students on the list are absent when the test is given or have transferred to another class, it would be very helpful if you could arrange in some way for testing those specific students.

Test Portions To Be Used

In order to reduce the testing burden on students and staff, only Tests 2 and 4 of the TABE Level M tests are to be used. Even though Level M is not primarily aimed at beginning students, it still contains some questions which beginning students can answer.

Procedures

Standard testing procedures should be followed. Each student should fill in his own answers without cooperating with any other student.

Before testing, you should be sure you have all the information, materials, and time you will need, as listed on the package cover sheet. Check materials and supplies. Is everything ready? Look over the Directions, a test booklet and the answer sheets. If possible, prepare a chalkboard model or illustration of the part of the answer sheet on which students record identifying data. (See page 4.) Test booklets should be kept in a safe place at all times so they will not fall into unauthorized hands.

To begin testing, spend a little time putting students at ease. Results of these tests will remain confidential and will not go on class records. If students are unfamiliar with tests, you may wish to explain that tests are frequently used in schools and by employers.

After testing, do not score tests. Mail completed answer sheets in prepaid envelopes supplied. (See page 14.)

[Pages 3-13 are omitted from this reproduction, since they contain copyright material. They were extracted from the Tests of Adult Basic Education, Level M, Examiner's Manual. Copyright (c) by McGraw-Hill, Inc. Used by permission of the publisher, CTB/McGraw-Hill, Monterey, California.]

Collect the answer sheets and booklets. Count them to make sure that all have been returned.

Put completed answer sheets in the prepaid envelope furnished you and mail to Dr. William Kent, System Development Corporation, 5827 Columbia Pike, Falls Church, Virginia 22041. Two envelopes are supplied, in case you are able to administer tests at a second session to students absent from the first session. Put completed answer sheets in the mail as soon as possible after testing.

Do not mail test booklets to us. After as many students as possible have been tested, deliver all test booklets and unused answer sheets to the person named in the upper right corner of your list of students to be tested.

Thank you for helping with this nationwide testing program.

## APPENDIX C - REPRODUCTIONS OF QUESTIONNAIRES AND RELATED FORMS

On the following pages are reproduced all the questionnaires and a selection of related forms used for data collection during this study. The questionnaires and forms are presented in the following order:

- ABE Class Locator and Roster of Enrollees as of November 15, 1971. These forms, along with cover letters of explanation, were sent to local program directors. The forms had two purposes -- to obtain information which would help interviewers set up schedules and find class locations; and to acquire names, age groups, and the migrant status of all students enrolled.
- Students to be Interviewed. Entries from the Class Locator and Roster were transcribed onto this form to provide a list of students to be interviewed, along with information on class locations and on program representatives for interviewers to contact. Master copies of these lists were retained in project files for destruction at the end of the study. Modified copies of the lists were furnished to local program contacts with the heading, "Students to be Tested."
- Form E1. Initial Enrollee Interview. Interviewers asked students the questions on this form in February and March, 1972.
- Form E2. Post-Program Enrollee Interview. First student follow-up interview, February-March, 1973.
- Form E3. Second Post-Program Enrollee Interview. Used in July-August, 1973.

- Form SP. State ABE Program Administrator Interview Guide. Interview form for State Directors of Adult Basic Education.
- Form P. ABE Program Administrator Interview. Interview form for local program directors.
- Form CL. ABE Class Instructor Interview. Interview form for classroom teachers. The last page of this form is the Class Attendance Summary.
- Follow-Up Letter on Attendance Summaries. This letter was sent to local program directors to follow up on missing student attendance data.

A final section of this appendix contains a comment on Form E2, Question 19, including evidence that the question was misunderstood by respondents.

ABE CLASS LOCATOR AND ROSTER OF
ENROLLEES AS OF NOVEMBER 15, 1971

Please complete this form as soon as possible and mail to:

Adult Basic Education Study
System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

The U.S. Office of Education is currently sponsoring a nationwide study of Adult Basic Education, designed to provide standardized information on ABE and its effects. The class identified below was chosen, by means of structured random sampling procedures, as a participant in the study. The study requires tests and interviews of selected students enrolled in the class as of November 15, 1971. The results of individual tests and interviews will be kept confidential. Your cooperation is most earnestly requested. The success of this important study depends on your assistance.

1. [SDC entry.]
   The class is listed in the study's records as:

   _____

   _____

2. Is any correction or addition needed to the class identification in item 1? If so, enter here:

   _____

   _____

3. An interviewer will be coming to the class for one or more visits to spend 20 to 30 minutes with each student selected. Please name one person (such as a teacher, supervisor, or principal) to be contacted for assistance in arranging and scheduling interviews:

   Name _____

   Position _____

   Telephone _____

4. Please provide any of the following information which might help the interviewer find his way to the class:

The class meets in:

Building Name _____

Street Address _____

Floor of Building _____

Room Number _____

Teacher's Name _____

Teacher's Phone Number _____

Other directions, if required (for example nearest cross-road, or landmarks)

_____

_____

The class schedule is:

Days of Week _____

Time of day class begins _____ ( ) am ( ) pm

Time of day class ends _____ ( ) am ( ) pm

Are there any exceptions or irregularities to the above schedule?

_____

_____

_____

5. Please list the names and check the age groups of all active ABE enrollees in this class, as of November 15, 1971. List all students enrolled as of November 15, whether or not currently attending. (If the class list is too long for this form, use additional pages, or provide a carbon copy or xerox copy of your class list, corrected to show enrollees on November 15. Be sure to enter each enrollee's age group -- under 45; 45 or above.)

| Names of All ABE Enrollees in this Class on November 15, 1971 | Age Group (check one) | |
|---|---|---|
| | Under 45 | 45 or Above |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

6. Please list the names of any of the foregoing enrollees who are known to be migrants. If unknown, make no entry.
(Definition: Migrant workers are individuals whose primary employment is on a seasonal or other temporary basis and who establish temporary residences, with or without their families, for the purpose of such employment.)

## STUDENTS TO BE INTERVIEWED - ADULT BASIC EDUCATION PROJECT

Class _____

Number of Interviewees _____

Teacher

Contact for scheduling

Class location:

Building _____

Address _____

Room, floor, etc. _____

Other directions _____

Class schedule _____

Students to be interviewed (no substitutions)

| | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| 13. | | | |
| 14. | | | |
| 15. | | | |
| 16. | | | |
| 17. | | | |
| 18. | | | |
| 19. | | | |
| 20. | | | |
| 21. | | | |
| 22. | | | |
| 23. | | | |
| 24. | | | |
| 25. | | | |

ED 085422

Market Opinion Research
327 John R
Detroit, Michigan 48226

and

System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

U.S. Office of Management and Budget #51-S-71036 Expiration Date: 9/30/73

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

TM 003 398

# EVALUATION OF ADULT BASIC EDUCATION FOR THE UNITED STATES OFFICE OF EDUCATION

## Form E1. Initial Enrollee Interview

For SDC office use:
Enrollee Code

— — — — — — — —
C1-C8

[C9-C10 - 01]

Interviewer's Name _____

Respondent's name is listed on Students to be Interviewed for

Class _____
City State Class #

Respondent interviewed at: (CHECK ONE)

[ ] ABE class location
[ ] Respondent's home
[ ] Other (IF OTHER, SPECIFY: _____)

Date of interview _____ [C11-C14]

I'm _____ from Market Opinion Research, a national research company. I'm here to ask you some questions to help with a survey of basic education programs all over the United States. We will be asking the same questions of more than 2,000 people.

Your answers will be kept confidential. We will add your answers to the answers of others. All answers will be used without names.

The purpose of this survey is to help improve basic education programs. Your answers are important, and we appreciate your help.

First, let me check your name with the names I have on the class list:

(RECORD RESPONDENT'S NAME) _____

Now, I'd like to ask you some questions about the basic education program. (If necessary, refer to class list for class location, schedule, and teacher's name to explain "basic education program".)

1. What was the approximate month and year that you first enrolled in the basic education program? _____ (Month) 19 _____ (Year) [C15-C18]

2. Since then, about about how many time have you attended basic education class?

   (RECORD NUMBER OF TIMES ATTENDED CLASS) _____ [C19-C21]

3. About how often do you think you will attend in the future? Will you attend: (READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

   C22 - 4 [ ] Every time (GO TO Q. 4)
   - 3 [ ] Most of the time (GO TO Q. 4)
   - 2 [ ] Not very often →
   - 1 [ ] Not at all →

   a. (IF NOT VERY OFTEN OR NOT AT ALL) If the basic education program were changed in some way, would you come more often?

   C23 - 1 [ ] Yes →

   b. (IF YES TO Q. 3a) What changes in the program would you like?

   _____
   _____
   _____
   _____

   [C24-C31]

   C23 - 2 [ ] No →

   c. (IF NO TO Q. 3a) What reasons prevent your attending more often?

   _____
   _____
   _____
   _____

   [C32-C39]

4. How did you first hear about this basic education program? (DO NOT READ ANSWERS. CHECK ALL ANSWERS RESPONDENT MENTIONS)

   C40 - 1 [ ] A relative
   C41 - 1 [ ] A friend or acquaintance
   C42 - 1 [ ] A student already enrolled in the basic education program
   C43 - 1 [ ] A teacher or recruiter from the basic education program
   C44 - 1 [ ] My employer
   C45 - 1 [ ] Employment service
   C46 - 1 [ ] Radio
   C47 - 1 [ ] TV
   C48 - 1 [ ] Newspaper
   C49 - 1 [ ] Church
   C50 - 1 [ ] Other (SPECIFY) _____

5. What was the MAIN reason you came to the basic education program? Was that reason mostly to be able to get a better job, or was it mostly to learn something, or was it some other reason?

C51- 1 [ ] Mostly to get a better job
- 2 [ ] Mostly to learn something
- 3 [ ] Other reason (SPECIFY) _____

6. Of the things you are learning in this program, which ONE of the following is the most important to you? (READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

C52 - 1 [ ] Reading
- 2 [ ] Writing
- 3 [ ] Working with numbers

7. Would people you know object to going to an elementary school or high school building to attend a basic education program, or would they not care about the type of building?

C53 - 1 [ ] Would object to an elementary school or high school building
- 2 [ ] Would not care about the type of building

Now, I am going to ask you some questions about jobs, and looking for jobs.

8. In the past six months--since July--did you ever look for a job?

C54 - 1 [ ] Yes → C54 - 2 [ ] No (GO TO Q. 9)

a. (IF YES TO Q. 8) In the past six months, did you ever spend more than one month looking for a job without finding a job?

C55 - 1 [ ] Yes → C55 - 2 [ ] No (GO TO Q.9)

(IF YES TO Q. 8a) Was it hard for you to find a job because you did not have enough education or training?

C56 - 1 [ ] Yes, not enough education or training
- 2 [ ] No, education or training did not make any difference
- 3 [ ] Don't know

(IF YES TO Q. 8a) What other reasons made it hard for you to find a job? (DO NOT READ LIST. CHECK ALL REASONS GIVEN BY RESPONDENT)

C57 - 1 [ ] Jobs are scarce
C58 - 1 [ ] Didn't like available work, working conditions, or pay (so turned down job offer)
C59 - 1 [ ] Arrest or prison record
C60 - 1 [ ] Race or nationality
C61 - 1 [ ] Age (jobs open to younger people only, or jobs open to older people only)
C62 - 1 [ ] Sex (jobs open to men only, or to women only)
C63 - 1 [ ] Other (SPECIFY)_____
C64 - 1 [ ] Don't know

9. Are you working now?

C65 - 1 [ ] Yes → a. (IF YES TO Q. 9) Do you feel you have a good chance of earning more money in the next six months either on your present job or on another job?

C66 - 1 [ ] Yes, chance of earning more
- 2 [ ] No

b. (IF YES TO Q. 9) What do you think the chances are that you might be laid off your job in the next six months? Are the chances: (READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

C67 - 1 [ ] Unlikely to be laid off
- 2 [ ] Possible to be laid off
- 3 [ ] Very likely to be laid off

C65 - 2 [ ] No → c. (IF NO TO Q. 9) If you were looking for a full-time job, what do you feel your chances would be of finding one in the next six months? Would your chances be: (READ ANSWERS AND LET RESPONDENT SELECT ONE)

C68 - 4 [ ] Excellent
- 3 [ ] Good
- 2 [ ] Fair
- 1 [ ] Poor

d. (IF NO TO Q. 9) When the basic education program is over, what do you feel your chances would be of finding a full-time job? Would they be: (READ ANSWERS AND LET RESPONDENT SELECT ONE)

C69 - 4 [ ] Excellent
- 3 [ ] Good
- 2 [ ] Fair
- 1 [ ] Poor

10. Did you earn money by working at a job any time during the last 3 months of 1971, that is, in October, November, or December?

C70 - 1 [ ] Yes (ASK QUESTIONS 11-20)
- 2 [ ] No (SKIP TO QUESTION 21)

(THESE QUESTIONS ASKED ONLY OF THOSE WHO ANSWERED "YES" TO Q.10)

11. In October, about how many hours per week did you usually work on your job or jobs?
(RECORD HOURS PER WEEK)_____ [C71-C72]

12. In October, approximately how much money did you earn from your job or jobs? (GET ANSWER AS TOTAL FOR ALL OF OCTOBER OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF OCTOBER) $_____ [C73-C76]

OR

(RECORD $ FOR EACH JOB IN OCTOBER)

$_____ for first job in October

$_____ for second job in October

$_____ for other job in October

$_____ for other job in October

13. How much were you usually paid for work in October? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS) [C77-C80]

Hourly pay $_____/hour
or
Part day pay $_____ per part day of _____ hours
or
Full-day pay $_____ per full day
or
Weekly pay $_____ per week
or
Two-weeks pay $_____ per two weeks
or
Other $_____ for _____

Now we would like to ask you the same questions about November. [C1-C8. Enrollee Code.]
[C9-C10 - 02]

14. In November, about how many hours per week did you usually work on your job or jobs?
(RECORD HOURS PER WEEK) _____ [C11-C12]

15. In November, approximately how much money did you earn from your job or jobs? (GET ANSWER AS TOTAL FOR ALL OF NOVEMBER OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF NOVEMBER) $_____ [C13-C16]

OR

(RECORD $ FOR EACH JOB IN NOVEMBER)

$_____ for first job in November
$_____ for second job in November
$_____ for other job in November
$_____ for other job in November

16. How much were you usually paid for work in November? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS) [C17-C20]

Hourly pay $_____ /hour
or
Part day pay $_____ per part day of _____ hours
or
Full-day pay $_____ per full-day
or
Weekly pay $_____ per week
or
Two-weeks pay $_____ per two weeks
or
Other $_____ for _____

Finally, we would like to ask you the same questions about December.

17. In December, about how many hours per week did you usually work on your job or jobs?
(RECORD HOURS PER WEEK)_____ [C21-C22]

18. In December, approximately how much money did you earn from your job or jobs? (GET ANSWER AS TOTAL FOR ALL OF DECEMBER OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF DECEMBER) $_____ [C23-C26]

OR

(RECORD $ FOR EACH JOB IN DECEMBER)

$_____ for first job in December
$_____ for second job in December
$_____ for other job in December
$_____ for other job in December

19. How much were you usually paid for work in December? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS)

| | | | |
|---|---|---|---|
| Hourly pay | $_____/hour | | [C27-C30] |
| or | | | |
| Part day pay | $_____ | per part day of _____ | hours |
| or | | | |
| Full-day pay | $_____ | per full day | |
| or | | | |
| Weekly pay | $_____ | per week | |
| or | | | |
| Two-weeks pay | $_____ | per two weeks | |
| or | | | |
| Other | $_____ | for _____ | |

20. Did you work more than 25 miles away from here (interview location) any time during October, November, or December?

C31 - 1 [ ] Yes C31 - 2 [ ] No (GO TO Q. 21)

a. (IF YES TO Q. 20) What city or cities did you work in or near during that time?

(RECORD CITY AND STATE BY MONTH)

October _____ [C32-C37]
City State

November _____ [C38-C43]
City State

December _____ [C44-C49]
City State

Now, I would like to ask a few questions for statistical purposes.

21. What year were you born?

(RECORD YEAR OF BIRTH) 19 _____ [C50-C51]

22. What language do you most often speak in your home? (CHECK ONE)

C52 - 1 [ ] English
- 2 [ ] Spanish
- 3 [ ] Other (SPECIFY) _____

23. Do you have any school age children, that is children who are between 5 and 18 years old?

C53 - 1 [ ] Yes
- 2 [ ] No

24. In the past year, have you helped any children with their school work?

C54 - 1 [ ] Yes
- 2 [ ] No

25. Were you in military service?

C55 - 1 [ ] Yes → C55 - 2 [ ] No (GO TO Q. 26)

a. (IF YES TO Q. 25) How many years were you in military service?
(RECORD NUMBER OF YEARS) _____ [C56-C57]

b. (IF YES TO Q. 25) What was your last year of service?
(RECORD LAST YEAR OF SERVICE) 19 _____ [C58-C59]

26. What was the last grade of school you completed?
(RECORD LAST GRADE COMPLETED) _____ [C60-C61]

27. Do you have a high school diploma?

C62 - 1 [ ] Yes (GO TO Q. 28) C62 - 2 [ ] No →

a. (IF NO TO Q. 27) What was the main reason for which you left school? (READ ANSWERS AND CHECK ONE)

C63 - 1 [ ] Wanted to go to work
- 2 [ ] Had to go to work for money
- 3 [ ] Military service
- 4 [ ] Marriage
- 5 [ ] Medical reasons or pregnancy
- 6 [ ] Not doing well in school
- 7 [ ] Doing OK in school but did not like school
- 8 [ ] Other (SPECIFY) _____

b. (IF NO TO Q. 27) When you left school, did you want to continue going to school?

C64 - 1 [ ] Yes C64 - 2 [ ] No

c. (IF NO TO Q. 27) Do you think you will ever enroll in a program to get a high school diploma or a GED certificate?

C65 - 1 [ ] Yes
- 2 [ ] No
- 3 [ ] Already enrolled

28. Do you think you will attend college sometime?

C66 - 1 [ ] Yes
- 2 [ ] No
- 3 [ ] Have already attended college

29. After you left school, did you ever enroll in a program to get additional vocational or technical training?

C67 - 1 [ ] Yes → C67 - 2 [ ] No (GO TO Q. 30)

a. (IF YES TO Q. 29) Are you enrolled in a vocational or technical training program now, or have you been at any time during the past year or two?
(FIND OUT WHEN ENROLLED AND CHECK ALL ANSWERS WHICH APPLY)

C68 - 1 [ ] Enrolled now
C69 - 1 [ ] Enrolled during the past year
C70 - 1 [ ] Enrolled more than one year ago

30. Do you think you will ever enroll in a program to get additional vocational or technical training?

C71 - 1 [ ] Yes
- 2 [ ] No

31. Are you receiving any welfare or public assistance?

C72 - 1 [ ] Yes
- 2 [ ] No

(BY OBSERVATION: CHECK CORRECT BOXES)

32. Respondent's Race:

C73 - 1 [ ] White
- 2 [ ] Black
- 3 [ ] Other

33. Respondent's Sex:

C74 - 1 [ ] Male
- 2 [ ] Female

(CONTINUE TO NEXT TWO PAGES FOR FOLLOW-UP INFORMATION ON RESPONDENT. All interviewees will be followed-up next year, whether or not they stayed in the basic education program.)

INTERVIEWER MAKES THE FOLLOWING POINTS:

That's the end of my questions for today.

We will need your help again, about a year from now, to complete our survey. I'd like to interview you again in a year

We will write you a letter in about a year, with a return postcard in it, to set up a time and place for a new interview. Please give us your name and address, so that we can write to you next year:

Respondent's name: _____
First Last

Present mailing address _____
Street Address Apt. No.

_____
City State Zip

Present telephone number _____

Could you give us several addresses and phone numbers of people that might help us contact you next year, in case you have moved? Please include relatives, friends, and other people in the community who know you through church, school, work, and so on.

Back-up #1: Care of Name _____

_____
Street Address Apt. No.

_____
City State Zip

Telephone: _____

Back-up #2: Care of Name _____

_____
Street Address Apt. No.

_____
City State Zip

Telephone: _____

Back-up #3: Care of Name _____

_____
Street Address Apt. No.

_____
City State Zip

Telephone: _____

[CHECK LIST FOR OTHER POSSIBILITIES (SUGGEST BUT DO NOT INSIST):]

Employer _____

_____

Church _____

_____

School attended by your children _____

_____

(children's names _____)

Social worker _____

_____

Union _____

Other _____

_____

_____

Market Opinion Research
28 West Adams
Detroit, Michigan 48226

and

System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

U.S. Office of Management and Budget #51-S-71036 Expiration Date: 9/30/73

ED 085413

# EVALUATION OF ADULT BASIC EDUCATION FOR THE UNITED STATES OFFICE OF EDUCATION

## Form E2. Post-Program Enrollee Interview

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Enrollee Code

TM 003 25

Respondent Name, Address, Phone (if known):

AFFIX LABEL HERE

Interviewer's Name _____

Date of interview _____

I'm _____ from Market Opinion Research, a national research company, with headquarters in Detroit. You remember that we interviewed you last year when you were in the basic education program at _____ (class location). I'm very glad you can help us with our second interview. As with the first interview, all your answers will be kept confidential. We will add your answers to the answers of others. All answers will be used without names

The purpose of this survey is to help improve basic education programs. Your answers are important, and we appreciate your help.

Now, I'd like to ask you some questions about the basic education program you were enrolled in last year (1971-72).

INTERVIEWER: EXPLAIN BASIC EDUCATION PROGRAM. (SEE INTERVIEWER INSTRUCTIONS)

1. Between September 1971 and December 1972, during what months did you attend the basic education program at least one time during the month?

| | Attended at Least Once | Did Not Attend (or Had Left Program) |
|---|---|---|
| September 1971 | [ ] | [ ] |
| October 1971 | [ ] | [ ] |
| November 1971 | [ ] | [ ] |
| December 1971 | [ ] | [ ] |
| January 1972 | [ ] | [ ] |
| February 1972 | [ ] | [ ] |
| March 1972 | [ ] | [ ] |
| April 1972 | [ ] | [ ] |
| May 1972 | [ ] | [ ] |
| June 1972 | [ ] | [ ] |
| July 1972 | [ ] | [ ] |
| August 1972 | [ ] | [ ] |
| September 1972 | [ ] | [ ] |
| October 1972 | [ ] | [ ] |
| November 1972 | [ ] | [ ] |
| December 1972 | [ ] | [ ] |

2. During the months you attended, approximately how many days a week did you usually attend basic education class?
   _____ days each week

3. How many hours did you usually spend in basic education class on the days you were there?
   _____ hours each day

4. When the basic education class met, did you attend:
   (READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)
   [ ] Every time (GO TO Q. 5)
   [ ] Most of the time? (GO TO Q. 5)
   [ ] Not very often?
   [ ] Not at all?

   a. (IF NOT VERY OFTEN OR NOT AT ALL) If the basic education program had been changed in some way, would you have come more often?

   [ ] Yes

   b. (IF YES TO Q 4a) What changes in the program would you have liked?
   _____
   _____
   _____
   _____

   [ ] No

   c. (IF NO TO Q4a) What reasons prevented you from attending more often?
   _____
   _____
   _____
   _____

5. Were the basic education program's methods of teaching different than those used by the grade schools you attended? (ASK RESPONDENT TO SELECT ONE)

[ ] Yes

[ ] No

[ ] Don't know

6. Compared with the grade schools you attended, how did you like the basic education program's methods?
(READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

[ ] Liked basic education methods much better than grade school.

[ ] Liked basic education methods better than grade school.

[ ] Liked basic education methods about the same as grade school.

[ ] Liked basic education methods less than grade school.

7. In your opinion, how interesting were the books, tapes, or other teaching materials used in the basic education program?
(ASK RESPONDENT TO SELECT ONE)

[ ] Very interesting

[ ] Interesting

[ ] Not interesting

8. In the program, did you have a teacher's aide (or assistant or helper) in addition to the teacher? (RESPONDENT SHOULD SELECT ONE)

[ ] Yes - both teacher and aide (assistant, helper)

[ ] No - teacher only

[ ] Don't know

9. How much time did the teacher spend working with you individually?
(READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

[ ] A lot of time

[ ] Some time

[ ] A little time

[ ] No time

10. How much time did a teacher's aide (or assistant or helper) spend working with you individually? (ASK RESPONDENT TO SELECT ONE)

[ ] A lot of time

[ ] Some time

[ ] A little time

[ ] No time



[ ] N/A - no teacher's aide in program

11. How much time did the teacher or aide spend working with you as part of a class or group? (ASK RESPONDENT TO SELECT ONE)

[ ] A lot of time

[ ] Some time

[ ] A little time

[ ] No time

12. How good do you feel your teacher was at helping you learn? (ASK RESPONDENT TO INDICATE ONE)

[ ] Excellent

[ ] Good

[ ] Fair

[ ] Poor

13. How good do you feel your teacher's aide was at helping you learn? (ASK RESPONDENT TO INDICATE ONE)

[ ] Excellent

[ ] Good

[ ] Fair

[ ] Poor

[ ] N/A - no teacher's aide in program

14. How much time did you spend in the program learning by yourself using books or instructional materials such as worksheets or machines? (ASK RESPONDENT TO SELECT ONE)

[ ] A lot of time

[ ] Some time

[ ] A little time

[ ] No time

15. I'm going to read descriptions of three methods of learning. Please tell me how useful these methods were in helping you learn. Which one of the three was the most useful to you, which one was the least useful, and which was in between.
(READ ANSWERS BELOW AND MARK:

#1 - MOST USEFUL
#2 - IN BETWEEN
#3 - LEAST USEFUL)

a._____ Learning by yourself with books or instructional materials
b._____ Working alone with a teacher or a teacher's aide
c._____ Working with a teacher as part of a group or class

16. Did the basic education program give you any health information or teach you anything about health?
[ ] Yes [ ] No

17. Did the basic education program help you receive health services from any source?
[ ] Yes [ ] No

18. Are you now enrolled in any education or training program? If so, what kind? (READ ANSWERS AND CHECK ALL INDICATED BY RESPONDENT)

[ ] No - not enrolled in education or training

[ ] Yes - basic education

[ ] Yes - high school or GED (high school equivalency)

[ ] Yes - college

[ ] Yes - vocational or technical training

19. Do you think you will ever enroll in any additional education or training program? If so, what kind? (READ ANSWERS AND CHECK ALL INDICATED BY RESPONDENT)

[ ] No - do not expect to enroll

[ ] Yes - basic education

[ ] Yes - high school or GED (high school equivalency)

[ ] Yes - college

[ ] Yes - vocational or technical training

20. How much do you feel your ability to read and understand what you have read has improved in the past year? (ASK RESPONDENT TO SELECT ONE)

[ ] Very much

[ ] Some

[ ] A little

[ ] Not at all

21. In the past year, how much do you feel your writing ability has improved? (ASK RESPONDENT TO SELECT ONE)

[ ] Very much

[ ] Some

[ ] A little

[ ] Not at all

22. In the past year, how much do you feel you have improved in your ability to work with numbers? (ASK RESPONDENT TO SELECT ONE)

[ ] Very much

[ ] Some

[ ] A little

[ ] Not at all

23. In the past year has your reading of newspapers, magazines and books outside the program increased? (ASK RESPONDENT TO SELECT ONE)

[ ] Very much
[ ] Some
[ ] A little
[ ] Not at all

24. In the past year, have you helped any children with their school work?

[ ] Yes [ ] No

Now, I am going to ask you some questions about jobs, and looking for jobs.

25. In the past six months--since July--did you ever look for a job?

[ ] Yes → [ ] No (GO TO Q. 26)

a. (IF YES TO Q.25) In the past six months, did you ever spend more than one month looking for a job without finding a job?

[ ] Yes → [ ] No (GO TO Q. 26)

b. (IF YES TO Q. 25a) Was it hard for you to find a job because you did not have enough education or training?

[ ] Yes, not enough education or training
[ ] No, education or training did not make any difference
[ ] Don't know

c. (IF YES TO 25a) What other reasons made it hard for you to find a job? (DO NOT READ LIST. CHECK ALL REASONS GIVEN BY RESPONDENT)

[ ] Jobs are scarce
[ ] Didn't like available work, working conditions, or pay (so turned down job offer)
[ ] Arrest or prison record
[ ] Race or nationality
[ ] Age (jobs open to younger people only, or jobs open to older people only)
[ ] Sex (jobs open to men only, or to women only)
[ ] Other (SPECIFY) _____
[ ] Don't know

26. Did anyone connected with the basic education program ever help you to find a job?

[ ] Yes [ ] No

27. Are you working now?

[ ] Yes → 28a. (IF YES TO Q.27) Do you feel you have a good chance of earning more money in the next six months either on your present job or on another job?

[ ] Yes, chance of earning more

[ ] No

b. (IF YES TO Q.27) What do you think the chances are that you might be laid off your job in the next six months? Are the chances: (READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

[ ] Unlikely to be laid off

[ ] Possible to be laid off

[ ] Very likely to be laid off

c. (IF YES TO Q.27) Is the job you have now the same job you had when you began the basic education program?

[ ] Yes [ ] No [ ] N/A - was unemployed when began program

→ d. (IF NO TO Q.28c) Do you prefer the job you have now to the one you had when you began the basic education program?

[ ] Yes

[ ] No

[ ] Don't know

e. How much do you feel your experience with the basic education program helped you in your present job? (READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

[ ] Very much

[ ] Some

[ ] A little

[ ] Not at all

f. Have you received a pay increase since October of the year before last (October 1971)?

[ ] Yes → g. (IF YES TO Q.28f) How much do you feel your experience with the basic education program helped you in getting this pay increase? (READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

[ ] Very much

[ ] Some

[ ] A little

[ ] Not at all

[ ] No

29. (IF NO TO Q. 27) If you were looking for a full-time job, what do you feel your chances would be of finding one in the next six months? Would your chances be: (READ ANSWERS AND LET RESPONDENT SELECT ONE)

[ ] Excellent

[ ] Good

[ ] Fair

[ [ Poor

(NOW GO TO Q.30)

30. Did you earn money by working at a job any time during the last 3 months of 1972, that is, in October, November, or December?

[ ] Yes (ASK QUESTIONS 31-40)

[ ] No (SKIP TO QUESTION 41)

(THESE QUESTIONS ASKED ONLY OF THOSE WHO ANSWERED "YES" TO Q. 30)

31. In October, about how many hours per week did you usually work on your job or jobs?
(RECORD HOURS PER WEEK)_____

32. In October, approximately how much money did you earn from your job or jobs? (GET ANSWER AS TOTAL FOR ALL OF OCTOBER OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF OCTOBER) $_____
OR
(RECORD $ FOR EACH JOB IN OCTOBER)
$_____ for first job in October
$_____ for second job in October
$_____ for other job in October
$_____ for other job in October

33. How much were you usually paid for work in October? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS)

| | | |
|---|---|---|
| Hourly pay | $_____/hour | |
| or | | |
| Part day pay | $_____ | per part day of ____ hours |
| or | | |
| Full-day pay | $_____ | per full day |
| or | | |
| Weekly pay | $_____ | per week |
| or | | |
| Two-weeks pay | $_____ | per two weeks |
| or | | |
| Other | $_____ | for _____ |

Now we would like to ask you the same questions about November.

34. In November, about how many hours per week did you usually work on your job or jobs? (RECORD HOURS PER WEEK)_____

35. In November, approximately how much money did you earn from your job or jobs? (GET ANSWER AS TOTAL FOR ALL OF NOVEMBER OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF NOVEMBER) $_____
OR
(RECORD $ FOR EACH JOB IN NOVEMBER)
$_____ for first job in November
$_____ for second job in November
$_____ for other job in November
$_____ for other job in November

36. How much were you usually paid for work in November? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS)

Hourly pay $_____/hour
or
Part day pay $_____per part day of _____ hours
or
Full-day pay $_____per full-day
or
Weekly pay $_____per week
or
Two-weeks pay $_____per two weeks
or
Other $_____ for _____

Finally, we would like to ask you the same questions about December.

37. In December, about how many hours per week did you usually work on your job or jobs? (RECORD HOURS PER WEEK)_____

38. In December, approximately how much money did you earn from your job or jobs? (GET ANSWER AS TOTAL FOR ALL OF DECEMBER OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF DECEMBER) $_____
OR
(RECORD $ FOR EACH JOB IN DECEMBER)
$_____ for first job in December
$_____ for second job in December
$_____ for other job in December
$_____ for other job in December

39. How much were you usually paid for work in December? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS)

Hourly pay $_____/hour
or
Part-day pay $_____per part day of _____ hours
or
Full-day pay $_____per full day
or
Weekly pay $_____per week
or
Two-weeks pay $_____per two weeks
or
Other $_____ for _____

40. Did you work more than 25 miles away from here (interview location) any time during October, November, or December?

[ ] Yes → [ ] No (GO TO Q.41)

a. (IF YES TO Q.40) What city or cities did you work in or near during that time? (RECORD CITY AND STATE BY MONTH)

October _____
City State
November _____
City State
December _____
City State

41. At the present time, are you receiving any welfare or public assistance?
[ ] Yes
[ ] No

(INTERVIEWER MAKES THE FOLLOWING POINTS):

That's the end of my questions for today.

We will need your help again, about six months from now, to complete our survey. I'd like to interview you again, around July.

We will contact you in July, to set up a time and place for a new interview. I'd like to make sure that I have correct information about you, so that we can contact you once more:

Respondent's name: _____
First Last

Present mailing address _____
Street Address Apt. No.

_____
City State Zip

Present telephone number _____

Could you give us several addresses and phone numbers of people that might help us contact you in July, in case you have moved? Please include relatives, friends, and other people in the community who know you through church, school, work, and so on.

Back-up #1: Care of Name _____

_____
Street Address Apt. No.

_____
City State Zip

Telephone: _____

Back-up #2: Care of Name _____

_____
Street Address Apt. No.

_____
City State Zip

Telephone: _____

Back-up #3: Care of Name _____

_____
Street Address Apt. No.

_____
City State Zip

Telephone: _____

[CHECK LIST FOR OTHER POSSIBILITIES (SUGGEST BUT DO NOT INSIST):]

Employer _____

_____

Church _____

_____

School attended by your children _____

_____

(children's names _____)

Social worker _____

_____

Union _____

Other _____

_____

_____

Market Opinion Research
28 West Adams
Detroit, Michigan 48226

and

System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

U.S. Office of Management and Budget #51-S-71036 Expiration Date: 9/30/73

# EVALUATION OF ADULT BASIC EDUCATION FOR THE UNITED STATES OFFICE OF EDUCATION

## Form E3. Second Post-Program Enrollee Interview

Enrollee Code

_ _ _ _ _ _ _ _

Respondent Name, Address, Phone (if known):

AFFIX LABEL HERE

Interviewer's Name _____

Date of Interview _____

I'm _____ from Market Opinion Research, a national research company, with headquarters in Detroit. You remember that we interviewed you a few months ago. I'm very glad you can help us again. As before, all your answers will be kept confidential. We will add your answers to the answers of others. All answers will be used without names.

The purpose of this survey is to help improve basic education programs. Your answers are important, and we appreciate your help.

Now, I'd like to ask if you have attended, in 1973, the same basic education program you were enrolled in last year (1971-72).

---

INTERVIEWER: EXPLAIN BASIC EDUCATION PROGRAM. (SEE INTERVIEWER INSTRUCTIONS)

---

1. Between January 1973 and June 1973, during what months did you attend the basic education program at least one time during the month?

| | Attended at Least Once | Did Not Attend (or Had Left Program) |
|---|---|---|
| January 1973 | [ ] | [ ] |
| February 1973 | [ ] | [ ] |
| March 1973 | [ ] | [ ] |
| April 1973 | [ ] | [ ] |
| May 1973 | [ ] | [ ] |
| June 1973 | [ ] | [ ] |

2. Are you now enrolled in any education or training program? If so, what kind? (READ ANSWERS AND CHECK ALL INDICATED BY RESPONDENT)

   [ ] No - not enrolled in education or training
   [ ] Yes - basic education
   [ ] Yes - high school or GED (high school equivalency)
   [ ] Yes - college
   [ ] Yes - vocational or technical training

3. Do you think you will ever enroll in a program to get a high school diploma or a GED certificate? (ASK RESPONDENT TO SELECT ONE)

   [ ] Yes - will enroll in a high school program
   [ ] Have finished high school program
   [ ] Am now enrolled in a high school program
   [ ] No, will not enroll in a high school program

4. Do you think you will attend college sometime?

   [ ] Yes
   [ ] No
   [ ] Have already attended college

5. Do you think you will ever enroll in a program to get additional vocational or technical training?

   [ ] Yes
   [ ] No

6. How much do you feel your ability to read and understand what you have read has improved in the past year? (ASK RESPONDENT TO SELECT ONE)

   [ ] Very much
   [ ] Some
   [ ] A little
   [ ] Not at all

7. In the past year, how much do you feel your writing ability has improved? (ASK RESPONDENT TO SELECT ONE)

   [ ] Very much
   [ ] Some
   [ ] A little
   [ ] Not at all

8. In the past year, how much do you feel you have improved in your ability to work with numbers? (ASK RESPONDENT TO SELECT ONE)

   [ ] Very much
   [ ] Some
   [ ] A little
   [ ] Not at all

9. In the past year has your reading of newspapers, magazines and books outside the program increased? (ASK RESPONDENT TO SELECT ONE)

   [ ] Very much
   [ ] Some
   [ ] A little
   [ ] Not at all

10. In the past year, have you helped any children with their school work?

   [ ] Yes
   [ ] No

Now, I am going to ask you some questions about jobs, and looking for jobs.

11. In the past six months--since January--did you ever look for a job?

[ ] Yes → [ ] No (GO TO Q. 12)

a. (IF YES TO Q. 11) In the past six months, did you ever spend more than one month looking for a job without finding a job?

[ ] Yes [ ] No

12. Are you working now?

[ ] Yes → [ ] No (GO TO Q. 14)

13a. (IF YES TO Q. 12) Is the job you have now the same job you had when you began the basic education program?

[ ] Yes [ ] No [ ] N/A - was unemployed when began program

b. (IF NO TO Q. 13a.) Do you now prefer the job you have now to the one you had when you began the basic education program?

[ ] Yes
[ ] No
[ ] Don't know

c. How much do you feel your experience with the basic education program helped you in your present job? (READ ANSWERS AND ASK RESPONDENT TO SELECT ONE)

[ ] Very much
[ ] Some
[ ] A little
[ ] Not at all

14. Did you earn money by working at a job any time during the 3 month period April, May, June 1973?

[ ] Yes (ASK QUESTIONS 15-24)
[ ] No (SKIP TO QUESTION 25)

(THESE QUESTIONS ASKED ONLY OF THOSE WHO ANSWERED "YES" TO Q. 14)

15. In April, about how many hours per week did you usually work on your job or jobs?
(RECORD HOURS PER WEEK) _____

16. In April, approximately how much money did you earn from your job or jobs? (GET ANSWER AS TOTAL FOR ALL OF APRIL OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF APRIL) $_____
OR
(RECORD $ FOR EACH JOB IN APRIL)

$_____for first job in April

$_____for second job in April

$_____for other job in April

$_____for other job in April

17. How much were you usually paid for work in April? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS)

Hourly pay $_____/hour
or
Part day pay $_____/per part day of ____hours
or
Full-day pay $_____/per full day
or
Weekly pay $_____/per week
or
Two-weeks pay $_____/per two weeks
or
Other $_____ for _____

Now we would like to ask you the same questions about May.

18. In May, about how many hours per week did you usually work on your job or jobs? (RECORD HOURS PER WEEK)_____

19. In May, approximately how much money did you earn from your job or jobs?
(GET ANSWER AS TOTAL FOR ALL OF MAY OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF MAY) $_____
OR
(RECORD $ FOR EACH JOB IN MAY)

$_____for first job in May

$_____for second job in May

$_____for other job in May

$_____for other job in May

20. How much were you usually paid for work in May? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS)

| | |
|---|---|
| Hourly pay | $_____/hour |
| or | |
| Part day pay | $_____/per part day of _____hours |
| or | |
| Full-day pay | $_____/per full-day |
| or | |
| Weekly pay | $_____/per week |
| or | |
| Two-weeks pay | $_____/per two weeks |
| or | |
| Other | $_____ for_____ |

Finally, we would like to ask you the same questions about June.

21. In June, about how many hours per week did you usually work on your job or jobs? (RECORD HOURS PER WEEK) _____

22. In June, approximately how much money did you earn from your job or jobs? (GET ANSWER AS TOTAL FOR ALL OF JUNE OR TOTAL FOR EACH JOB)
(RECORD TOTAL $ FOR MONTH OF JUNE) $_____
OR
(RECORD $ FOR EACH JOB IN JUNE)

$_____for first job in June

$_____for second job in June

$_____for other job in June

$_____for other job in June

23. How much were you usually paid for work in June? (GET ANSWER IN ANY ONE OF THE FOLLOWING WAYS)

| | |
|---|---|
| Hourly pay | $_____/hour |
| or | |
| Part day pay | $_____/per part day of _____hours |
| or | |
| Full-day pay | $_____/per full-day |
| or | |
| Weekly pay | $_____/per week |
| or | |
| Two-weeks pay | $_____/per two weeks |
| or | |
| Other | $_____ for _____ |

24. Did you work more than 25 miles away from here (interview location) any time during April, May, or June?

[ ] Yes [ ] No

a. (IF YES TO Q.24) What city or cities did you work in or near during that time? (RECORD CITY AND STATE BY MONTH)

April _____
City State

May _____
City State

June _____
City State

---

(THIS QUESTION ASKED OF ALL RESPONDENTS)

25. At the present time, are you receiving any welfare or public assistance?

[ ] Yes

[ ] No

That's the end of my questions. Thank you for helping us.

ED 085412

[For SDC use.]

State _____

SDC Interviewer _____

Date _____

[Enter sources and references on back of page; obtain copies of relevant documents whenever possible.]

Form SP

EVALUATION OF ADULT BASIC EDUCATION FOR THE UNITED STATES OFFICE OF EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

TM 003 554

## Form SP. State ABE Program Administrator Interview Guide

U.S. Office of Management and Budget # 51-S-71036
Expiration Date: 9-30-73

Adult Basic Education Study
System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

Telephone: (703) 820-2220

## Form SP. State ABE Program Administrator Interview Guide

1. Methods of Collecting and Analyzing Information on Needs for ABE Within the State

   a. Please comment on the information used in this State to help determine local needs for ABE. For example, do you use:

      - U.S. Census data on educational levels?
      - Employment data?
      - Surveys made by school districts or other local agencies?
      - Special State ABE surveys?
      - Other data, surveys, or reports?

   b. Please comment on how this information is used and analyzed. For example, are reports prepared which:

      - Show what parts of the State (e.g. counties or school districts) have the greatest numbers or concentrations of adults needing ABE?
      - Show discrepancies, locality by locality within the State, between numbers of adults needing ABE and numbers actually enrolled in ABE?
      - Show future projections of needs for ABE?
      - Show where limited ABE resources can be most effectively applied?
      - Show other aspects of needs for ABE?

2. Methods of Meeting Local Needs for ABE

a. Please comment on actions taken at the State level to direct ABE support toward local areas. For example, is State level assistance given to:

- Establishing or enlarging ABE programs in certain localities?
- Recruiting or training administrators or teaching staff in certain localities?
- Recruiting students in certain localities?
- Other

b. What State guidelines are furnished to assist local programs serve specific categories of adults--either those who are most in need of ABE, or those who can most effectively profit from ABE? For example, does the State recommend:

- Eligibility requirements for enrollment in ABE?
- Methods for recruiting and retaining special types of ABE students?
- Other rules or procedures for concentrating local ABE efforts on specific target populations?

3. Use of Results and Products of Innovative Projects

a. To what extent and by what means is State-level action taken to promote the use of innovative methods and materials developed by special or demonstration ABE projects?

b. Please identify the particular State-sponsored or Federally-sponsored special projects whose results or products have been used.

c. Please identify locations and time periods within the State where the innovations referred to have been used.

d. Please comment on the degrees of success associated with using these innovations within the State.

4. Expenditures for ABE Within the State

a. Please provide copies of whatever data are currently available at the State level regarding total expenditures for ABE within the State for two years (1970-71, actual; 1971-72, estimated). Show breakdown as follows:

- Federal ABE funds for each of the two years.
- State ABE funds for each of the two years.
- Local ABE funds within the State, for each of the two years.

b. Please provide copies of whatever data are currently available at the State level relating these expenditures to the following:

- Total number of ABE instructional hours (number of participants actually in the classroom times the number of hours of classroom instruction) in the State, for each of the two years.
- Specific expenditure (program input) categories used for State-level records, for each of the two years. Possible categories--depending on State methods of record-keeping--might include administration, instruction, counseling, textbooks, equipment, facilities, teacher training, program evaluation, demonstration projects, etc.

ED 085414

Form P

EVALUATION OF ADULT BASIC EDUCATION FOR THE
UNITED STATES OFFICE OF EDUCATION

TM 003 336

## Form P. ABE Program Administrator Interview

U.S. Office of Management and Budget # 51-S-71036
Expiration Date: 9-30-73

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Adult Basic Education Study
System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

Telephone: (703) 820-2220

## Form P. ABE Program Administrator Interview

[SDC enter items 1-5; verify with program administrator]

1. Name of ABE Program:

   _____

2. Classes Sampled Within This Program:

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

   f. _____

3. Director of This Program:

   _____

4. Director's office mailing address:

   _____

   _____

   _____

   City State Zip

5. Telephone _____

For SDC Office Use

State _____

County or District _____

Any other program sampled at this site? _____

Program Code _ _ _ _ _ _

Interviewer _____

Date _____

6. Sources (other than program director) for information entered on this form:

   _____

   _____

   _____

7. What administrative entity (e.g. school district, college, consortium, etc.) operates this program?

_____

_____

_____

8. For approximately how many ABE classes (including those sampled by this study) is this program responsible? _____

9. Does this ABE program have a special relationship to any particular manpower program, community agency, or employer? Explain.

_____

_____

_____

_____

_____

10. Number of years this ABE program has been in existence: _____

11. Is continuance of this ABE program for the next two years reasonably certain? . . . . . ( ) Yes ( ) No

Explain. _____

_____

_____

Two-Year Sources of ABE Program Funds

| | 1970-71 | 1971-72 (est.) | For SDC office completion: 1971-72 Percentages |
|---|---|---|---|
| 12. Federal | $_____ | $_____ | _____% |
| 13. State | $_____ | $_____ | _____% |
| 14. Local (specify) _____ | $_____ | $_____ | _____% |
| 15. Student Fees | $_____ | $_____ | _____% |
| 16. Other (specify) _____ | $_____ | $_____ | _____% |
| 17. TOTAL | $_____ | $_____ | 100 % |

Two-Year ABE Program Expenditure Categories

| | 1970-71 | 1971-72 (est.) | 1971-72 Percentages |
|---|---|---|---|
| 18. Administrative and Supervisory Salaries and Benefits | $_____ | $_____ | _____% |
| 19. Instructional Salaries and Benefits (Teachers & Aides) | $_____ | $_____ | _____% |
| 20. Guidance & Counseling Salaries | $_____ | $_____ | _____% |
| 21. Clerical & Other Salaries | $_____ | $_____ | _____% |
| 22. Textbooks, Supplies, and Instructional Equipment | $_____ | $_____ | _____% |
| 23. All Other | $_____ | $_____ | _____% |
| 24. TOTAL | $_____ | $_____ | 100 % |

25. If expenditure totals (24) are not the same as source totals (17) above, explain:

_____

_____

_____

1971-72 Hourly Pay Scales for ABE Teachers and Aides

| | | Minimum Hourly Pay | Maximum Hourly Pay |
|---|---|---|---|
| 26. | Teachers | $_____ | $_____ |
| 27. | Aides | $_____ | $_____ |

28. If any ABE teachers or aides are paid on other than an hourly basis, enter rates and explain:

_____

_____

_____

In 1971-72, what special ABE program funds and personnel were explicitly allocated or assigned to the following non-instructional functions? Do not include instructional salaries. Do not include teachers or aides unless they explicitly and regularly have specified portions of their time allocated to non-instructional duties outside of the classroom. [Example illustrating "Hrs/Wk" entry: if 2 people are explicitly assigned to recruiting and outreach, one full-time and one half-time, enter 2 for "Number of people,", 30 for "Average Hrs/Wk," and 60 for "Total Hrs/Wk".]

| | | Special Personnel | | | |
|---|---|---|---|---|---|
| | Special Funds | Job Title(s) | Number of People | Average Hrs/Wk | Total Hrs/Wk |
| 29. Recruiting & Outreach | $_____ | _____ | ____ | ____ | ____ |
| 30. Counseling & Advisement | $_____ | _____ | ____ | ____ | ____ |
| 31. Post-Program Placement | $_____ | _____ | ____ | ____ | ____ |
| 32. Evaluation & Improvement of Instructional Methods and Materials | $_____ | _____ | ____ | ____ | ____ |
| 33. Community Relations | $_____ | _____ | ____ | ____ | ____ |
| 34. Inservice Training of Teachers & Aides | $_____ | _____ | ____ | ____ | ____ |

35. Do any of the classes sampled by this study (item 2 above) receive unusually low or high shares of the program expenditures and allocations entered for items 18-24 and 29-34 above? Or does each get about an average share of program funds, effort, and personnel?

( ) Each sampled class receives about an average share.

( ) One or more of the sampled classes receives less than or more than an average share, as explained below (key by letter to list of classes in item 2):

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

Methods for Establishing and Improving ABE Classes
(use additional pages, if needed)

36. How are local needs for ABE determined?

37. How do you decide how many ABE classes to have each year, and where they should be located?

38. What are enrollee eligibility requirements?

39. How are potential enrollees identified and recruited?

40. To what extent and by what means does this ABE program adopt innovative methods and materials developed by special or demonstration ABE projects?
(Identify the particular State-sponsored or Federally sponsored special projects whose results or products have been used.)

ED 085415

TM 003 357

Form CL

EVALUATION OF ADULT BASIC EDUCATION FOR THE
UNITED STATES OFFICE OF EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

# Form CL. ABE Class Instructor Interview

U.S. Office of Management and Budget # 51-S-71036
Expiration Date: 9-30-73

Adult Basic Education Study
System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

Telephone: (703) 820-2220

## Form CL. ABE Class Instructor Interview

For SDC Office Use:

State _____

County or District _____

Program _____

Class Code:
_ _ _ _ _ _ _ _

11/15/71 Actual Enrollment _____

Interviewer _____

Date _____

1. Class Identification _____
2. Name of class instructor _____
3. Instructor's telephone _____
4. Name, position, and telephone of person (other than instructor) providing information entered on this form

   _____

5. Does this class have a regular schedule of meetings, or is it a part of a Learning Center (or similar activity) where students attend whenever they can? Explain.

   _____

   _____

   _____

   _____

For SDC Office Use:
Explain basis for definition of this class if there is some complication (e.g. part of a Learning Center). How does information entered on this form relate to this basis?

_____

_____

_____

_____

6. Approximate grade levels covered by class _____
7. Meeting place (street address, room, floor, etc.)

   _____

   _____

   _____

8. Type of meeting place:

   ( ) Primary school

   ( ) Secondary school

   ( ) Post-secondary school (college, etc.)

   ( ) Adult Education Center

   ( ) Other (specify) _____

9. Does this ABE class have a special relationship to any particular organization or program outside the school system (e.g. manpower program, community agency, union, employer, etc.)? Explain.

   _____

   _____

   _____

10. Month in which class begins _____; ends _____

11. Weekly class schedule (e.g. TuTh 7-10 pm) _____

12. Total number of meetings scheduled (e.g. 30) _____

13. Does this class have open enrollment? Explain.

    _____

    _____

14. Can you estimate what fraction of this class' November 1971 enrollees will have dropped out by April 1972? Explain.

    _____

    _____

15. As you know, our project involves a series of special tests and interviews. We will also need from you, after the last meeting of the class, summarized attendance data on each of the students involved in our study. (See last page of this interview form.) Could you give us your comments on these activities (problems, prospects, etc.)?

    _____

    _____

    _____

    _____

    _____

16. Do any current enrollees receive pay or financial assistance for attending class? ( ) Yes ( ) No

If yes, explain.

_____

_____

17. What are the instructional salaries paid for a normal meeting of this class?

_____ teacher hours at $_____ per hour* = $_____
_____ aide hours at $_____ per hour* = $_____

[*IF HOURLY RATES ARE NOT AVAILABLE, ENTER OTHER BASIS:_____. ]

18. Are there any unusual cost-related factors associated with this class? That is, over and above the normal instructional materials, counseling services, administrative supervision, etc., provided by the ABE program of which this class is a part, does this class represent any unusual extra services or extra equipment? Or, does this class get less than normal support from the ABE program? Explain.

_____

_____

_____

_____

_____

_____

_____

For SDC office use:

Normal instructional salaries for one class meeting (from above) $_____. Meeting length _____ hours. Cost of instructional salaries per hour $_____. From Form P, instructional salaries in this program average _____% of total program costs. From Form P and above, this class (may ____) (may not ____) be regarded as average. If average, its total costs are estimated at $_____ per hour. If not average, its total costs are estimated at $_____ per hour, based on _____

_____

_____

Instructional Staff for this ABE Class
[ENTER NUMBERS RATHER THAN CHECK MARKS (E.G. 0, 1, 1-1/2) IN EVERY BLANK SPACE.]

| | Number of Teachers | Aides | Unpaid Volunteers |
|---|---|---|---|
| 19. Present at normal class meeting | ____ | ____ | ____ |
| 20. Holding teaching certificate | ____ | ____ | ____ |
| 21. More than 2 years ABE experience | ____ | ____ | ____ |
| 22. Attended short ABE workshop or course or inservice training session (12 hours or less) | ____ | ____ | ____ |
| 23. Attended longer ABE workshop or course or inservice training session (13 hours or more) | ____ | ____ | ____ |
| 24. Same race and ethnic group as majority of students | ____ | ____ | ____ |
| 25. Assigned to ABE at least 20 hours a week | ____ | ____ | ____ |

Emphasis or Priority of Various Instructional Goals for this ABE Class
[CHECK ONE IN EACH ROW]

| | Great Emphasis | Some Emphasis | Present but Not Emphasized | Not Present |
|---|---|---|---|---|
| 26. Reading | ( ) | ( ) | ( ) | ( ) |
| 27. Writing | ( ) | ( ) | ( ) | ( ) |
| 28. Spelling | ( ) | ( ) | ( ) | ( ) |
| 29. Computation | ( ) | ( ) | ( ) | ( ) |
| 30. Preparation for GED studies | ( ) | ( ) | ( ) | ( ) |
| 31. Preparation for job improvement | ( ) | ( ) | ( ) | ( ) |
| 32. "Life skills"--e.g. voting, money-management | ( ) | ( ) | ( ) | ( ) |
| 33. Grade-level advancement | ( ) | ( ) | ( ) | ( ) |
| 34. Teaching parents to assist their children in school | ( ) | ( ) | ( ) | ( ) |

Features of This ABE Class

Enter check marks in the table below according to the degree to which various features are present. Check language instruction features and computation instruction features separately, where indicated.

| | | Always | Usually | Sometimes | Rarely or Never |
|---|---|---|---|---|---|
| 35. | Programmed instruction - language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 36. | Individualized instruction - language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 37. | Job-related instructional materials - language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 38. | Adult-oriented instructional materials - language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 39. | Adult furniture, setting, procedures, etc. - | ( ) | ( ) | ( ) | ( ) |
| 40. | Commercially prepared tests to determine placement in class - language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 41. | Commercially prepared tests to measure improvement - language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 42. | Counseling services available - language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 43. | Post-program placement - services available | ( ) | ( ) | ( ) | ( ) |
| 44. | Student-determined - language | ( ) | ( ) | ( ) | ( ) |
| | rates of progress computation | ( ) | ( ) | ( ) | ( ) |
| 45. | Student-selected goals, methods, and materials - language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 46. | Student participation in evaluation and improvement of materials and methods-language | ( ) | ( ) | ( ) | ( ) |
| | computation | ( ) | ( ) | ( ) | ( ) |
| 47. | Students help instruct - language | ( ) | ( ) | ( ) | ( ) |
| | each other computation | ( ) | ( ) | ( ) | ( ) |

48. Extent of presence and use of mechanical equipment for instruction:

_____

_____

_____

_____

49. Other special features of this ABE class:

_____

_____

_____

_____

50. In this class, have innovative methods or materials been adopted which have been developed by special or demonstration ABE projects?
( ) Yes ( ) No

If yes, identify the particular projects, as well as the particular results and products used from those projects.

_____

_____

_____

_____

Class Attendance Summary for Students Participating in U.S. Office of Education Study of ABE

Directions: This page is to be detached from Form CL and retained for completion after the class has finished for the year. (If the class continues into the summer, this page should be completed on or about June 30, 1972.) Mail to: Adult Basic Education Study
System Development Corporation
5827 Columbia Pike
Falls Church, Virginia 22041

[For SDC Office Use:
Class Code: _ _ _ _ _ _ _]

| Names of Students Participating in Study | Race (as reported in your State) | Month and Year of First ABE Class Attendance | Month and Year of Last ABE Class Attendance | Total Number of ABE Class Sessions Attended | Number of ABE Class Sessions Attended in | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Nov '71 | Dec '71 | Jan '72 | Feb '72 | Mar '72 | Apr '72 | May '72 | June '72 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

FOLLOW-UP LETTER ON ATTENDANCE SUMMARIES

SYSTEM DEVELOPMENT CORPORATION
5827 Columbia Pike, Falls Church, Virginia 22041

With your assistance, the in-class data collection activities of the U.S. Office of Education's study of Adult Basic Education have been successfully completed. The efforts devoted by you and members of your program staff are very much appreciated.

We are now engaged in follow-up activities to obtain missing data. When we visited your program, we left Attendance Summary forms with the instructors of the classes included in the study, asking for the forms to be filled in and returned to us by around the end of June. As of today, we are missing one or more forms from classes in your program, as noted at the end of this letter.

These Attendance Summaries are particularly important for the study, since they enable us to relate student gains to the number of classes attended. We would certainly appreciate your help in obtaining the missing information.

Enclosed are duplicate copies of forms for the classes from which we have not yet received attendance data. Could we ask your assistance in having them filled in and returned to us -- either from your office records or from records kept by the class teachers? We would be most grateful if this could be done, so that we can include this important information in our study.

Again, thank you very much for your help.

Sincerely,

William P. Kent, Ph.D.
Project Director

P.S. Partially filled-in Attendance Summaries are enclosed for the following classes, from which we have not yet received completed forms:

COMMENT ON FORM E2, QUESTION 19

Answers to Question 19 on Form E2 were so different from expectation that it appeared respondents had misunderstood the question. The question as asked is reproduced below, along with the percentages of answers given:

19. Do you think you will ever enroll in any additional education or training program? If so, what kind? (READ ANSWERS AND CHECK ALL INDICATED BY RESPONDENT)

[22.5%] No - do not expect to enroll
[22.2%] Yes - basic education
[23.9%] Yes - high school or GED (high school equivalency)
[10.2%] Yes - college
[27.0%] Yes - vocational or technical training

On Form E1, similar questions were asked using a different structure of questions. (See E1, questions 27c, 28, and 30.) Answers to these E1 questions were very different from answers to E2, Question 19. With respect to college, for example, 58.9% of E1 respondents but only 10.2% of E2 respondents thought they would attend college sometime.

To check the supposition that this discrepancy in E2 answers resulted from failure of some interviewers to emphasize that multiple answers would be accepted for Question 19, Form E3 broke the question into separate parts. These questions (E3, Q3-5) are reproduced below, along with the percentages of answers given:

3. Do you think you will ever enroll in a program to get a high school diploma or a GED certificate? (ASK RESPONDENT TO SELECT ONE)

[53.4%] Yes - will enroll in a high school program
[22.0%] Have finished high school program
[ 5.0%] Am now enrolled in a high school program
[19.5%] No, will not enroll in a high school program

4. Do you think you will attend college sometime?

[33.9%] Yes
[63.4%] No
[ 2.7%] Have already attended college

5. Do you think you will ever enroll in a program to get additional vocational or technical training?

[65.4%] Yes
[34.6%] No

As can be seen, the answers are quite different from those given to E2, Q19; they are also closer to, but far from identical with, responses to the corresponding questions from Form E1. Therefore E2, Q19 was disregarded as being unclearly phrased. In any future adaptation of this project's instrumentation, Question 19 of Form E2 should not be used.

## APPENDIX D - ILLUSTRATIVE CONFIDENCE INTERVALS

This study's total sample was designed as the sum of two independent and approximately equal "half samples," each of which was selected from the population in accordance with the same set of rules (see Appendix A). One purpose of this design was to make possible the construction of confidence intervals for variables of interest. A confidence interval is an indicator of the precision of an estimate, i.e., of how close the estimate can be expected to be to the true population value. For example, an 80% confidence interval for a population mean is a statement about the location of the population mean that may be interpreted as follows. If with the same procedure samples were drawn repeatedly and if for each sample a confidence interval for the mean were computed, the mean would fall within these intervals 80% of the time. In the present case, the estimates for the two half samples (here called sample A and sample B) are 50% confidence intervals for the corresponding population value. These 50% confidence intervals are given below for illustrative instances of the data presented in the main body of this report. Tabulations of 80% confidence intervals which were calculated for some of the same instances are also presented. From these figures, the reader can be guided as to the accuracy of the information presented.

| Questionnaire Item | Response | Percent | 50% Confidence Interval | 80% Confidence Interval |
|---|---|---|---|---|
| Sex | Male | 38.4 | 33.0-43.8 | 21.8-55.0 |
| | Female | 61.6 | 56.2-67.0 | 45.0-78.3 |
| Race | White | 48.5 | 46.2-50.8 | 41.5-55.5 |
| | Black | 43.9 | 40.8-46.9 | 34.5-53.2 |
| | Other | 7.6 | 6.8- 8.4 | 5.2-10.1 |
| Language Most Often Spoken in Home | English | 87.6 | 86.8-88.4 | 85.2-90.0 |
| | Spanish | 9.1 | 7.0-11.2 | 2.5-15.7 |
| | Other | 3.2 | 1.9- 4.6 | 0.0- 7.4 |
| H.S. Diploma or Equivalent | Yes | 14.1 | 10.8-17.6 | 3.7-24.6 |
| | No | 85.8 | 82.4-89.2 | 75.4-96.3 |

| Questionnaire Item | Response | Percent | 50% Confidence Interval | 80% Confidence Interval |
|---|---|---|---|---|
| Think Will Attend College Sometime | Yes | 60.7 | 59.5-61.9 | 57.0-64.4 |
| | No | 37.9 | 36.5-39.2 | 33.6-42.1 |
| | Have already attended | 1.4 | 1.2- 1.6 | 0.8- 2.0 |
| Have Ever Enrolled in Post-School Vocational or Technical Training | Yes | 31.9 | 30.2-33.5 | 26.9-36.9 |
| | No | 68.1 | 66.5-69.8 | 63.1-73.1 |
| Have School-Age Children (5-18 years) | Yes | 50.7 | 49.4-51.8 | 46.9-54.4 |
| | No | 49.3 | 48.1-50.6 | 45.6-53.1 |
| Have Helped Children with School Work in Past Year | Yes | 54.8 | 54.3-55.4 | 53.2-56.5 |
| | No | 45.2 | 44.6-45.7 | 43.5-46.8 |
| Working Now | Yes | 54.6 | 52.7-56.5 | 48.7-60.5 |
| | No | 45.4 | 43.5-47.3 | 39.5-51.2 |
| Receiving Welfare or Public Assistance | Yes | 26.1 | 25.3-26.8 | 23.8-28.4 |
| | No | 73.9 | 73.2-74.7 | 71.6-76.2 |
| Some Job Earnings Oct-Dec 1971 | Yes | 57.8 | 55.9-59.7 | 51.8-63.7 |
| | No | 42.2 | 40.3-44.1 | 36.2-48.2 |
| Looked for a Job Last Half of 1971 | No | 66.3 | 64.0-68.7 | 59.2-73.5 |
| | Yes, but didn't have to look more than a month | 16.3 | 16.1-16.6 | 15.6-17.0 |
| | Yes, and had to look more than a month | 17.3 | 17.1-17.5 | 16.6-18.0 |
| Former Military Service | Yes | 8.5 | 5.6-11.4 | 0.0-17.3 |
| | No | 91.5 | 88.6-94.4 | 82.7-100.0 |
| Expected Future Attendance | Every time | 40.2 | 38.4-42.0 | 34.7-45.7 |
| | Most of the time | 44.6 | 41.2-48.1 | 33.9-55.3 |
| | Not very often | 6.7 | 6.5- 6.8 | 5.2- 8.1 |
| | Not at all | 8.5 | 7.0-10.1 | 3.8-13.2 |

Instances of 50% confidence intervals for test gain means include:

Mathematics Gain, by Employment Status

| | |
|---|---|
| Mean Gain, if Working Now | 0.29 |
| 50% Confidence Interval | 0.28-0.30 |
| Mean Gain, if Not Working Now | 0.39 |
| 50% Confidence Interval | 0.28-0.53 |

Reading Gain, by Last Grade of School Completed

| | |
|---|---|
| Mean Gain for less than 7 grades | 0.72 |
| 50% Confidence Interval | 0.71-0.73 |
| Mean Gain for grades 7-8 | 0.28 |
| 50% Confidence Interval | 0.15-0.44 |
| Mean Gain for grades 9-10 | 0.39 |
| 50% Confidence Interval | 0.36-0.42 |
| Mean Gain for grades 11 and above | 0.61 |
| 50% Confidence Interval | 0.28-0.93 |

## APPENDIX E - ILLUSTRATIVE RESULTS OF MULTIPLE REGRESSION ANALYSES

Introduction. In the course of this study, data were collected from different sources and at different points of time. These data included information on:

- a broad spectrum of student characteristics at three times during a period of 18 months
- classroom methodologies
- teacher characteristics
- attendance records
- reading and mathematics test scores at two points in time
- socio-economic indicators of the communities in which the classrooms were located

One objective of this study was to identify those variables that may be successfully manipulated by program administrators so as to improve the educational and economic status of participating students. Such variables would obviously be restricted to classroom techniques. However, the effectiveness of classroom techniques may be expected to vary with demographic characteristics of student groups. Accordingly, we subdivided the ABE student population into four race-sex groups. Stepwise multiple linear regressions were computed for the entire population and for each of the four subgroups. This technique was used to determine optimal sets of explanatory variables. The same statistical procedures, applied to the same sets of variables, were performed for each subgroup and for the entire population, so as to facilitate comparisons.

Several different measures of outcomes were used. These were residual reading gains, residual math gains, and residual changes in earnings between the last quarter of 1971 and the last quarter of 1972. The residual is computed by linear regression of the second score on the initial score and subtraction of the regression estimate of the second score from its actual score. Residual

rather than raw gain outcome measures were used to take account of initial levels of reading, mathematics and earnings. Residual change scores also have been shown to be psychometrically more reliable than raw gain scores. (E. F. O'Connor, Jr., Extending classical test theory to the measurement of change. Review of Educational Research, 1972, 42, 73-97.)

Regressions were performed both with student as unit of analysis and with class as unit of analysis. Independent predictor variables were selected after considerable preliminary exploratory analysis. Interrelationships among the educational, demographic, sociological, and economic data were studied. Variables that could not reasonably be interpreted as causal or explanatory were eliminated from the initial pool of predictors. Thus, if a variable could logically be considered an effect rather than a predictor, it was removed. In accordance with this procedure, a pool of independent variables was created for use in multiple regression analyses.

All multiple regressions were performed in stepwise fashion, in accordance with the following rules. No more than 10 variables were to be selected from among the independent variables subject to the condition that for each variable introduced into the equation its tolerance level was at least .6 and the F value of its beta weight was at least 1. Though these are obviously arbitrary restrictions, they were adopted so as to facilitate comparisons of results among groups.

Variables Used. Thirty-seven independent variables, selected from the different data files, were included in all the regressions reported with student as unit of analysis. These variables together with their definitions are shown in Table E-1. For some analyses, independent variables were included in addition to those listed in the table.

Table E-1. Independent Variables Included in All Multiple Regressions with Student as Unit of Analysis

| Variable | Code | Source | Question No. |
|---|---|---|---|
| How often will you attend in the future? | 1=Not at all 2=Not often 3=Most of time 4=Every time | E1 | 3 |
| Are you working now? | 0=No 1=Yes | E1 | 9 |
| What year were you born? 19?? | Actual year after 1900. (00 if before 1900.) | E1 | 21 |
| Do you have any school age children? | 0=No 1=Yes | E1 | 23 |
| What was the last grade of school completed? | | E1 | 26 |
| Are you receiving welfare or public assistance? | 0=No 1=Yes | E1 | 31 |
| Compared with grade school, did you like basic education methods? | 1=Much better 2=Better 3=Same 4=Less | E2 | 6 |
| Rank learning by yourself with books or instructional materials against the alternatives of working alone with a teacher or as part of a group with a teacher. | 1=Most useful 2=In between 3=Least useful | E2 | 15A |
| Did the basic education program help you receive health services from any source? | 1=Yes 2=No | E2 | 17 |
| Are you not enrolled in education or training? | 0=Otherwise 1=Not enrolled | E2 | 18A |
| Are you enrolled in basic education? | 0=No 1=Yes | E2 | 18B |
| In the past year, how much do you feel your writing ability has improved? | 1=Very much 2=Some 3=A little 4=Not at all | E2 | 21 |
| In the past year, how much do you feel you have improved your ability to work with numbers? | 1=Very much 2=Some 3=A little 4=Not at all | E2 | 22 |

Table E-1. (Continued)

| Variable | Code | Source | Question No. |
|---|---|---|---|
| In the past year, have you helped any children with their school work? | 1=Yes 2=No | E2 | 24 |
| Are you working now? | 1=Yes 2=No | E2 | 27 |
| Did you earn money by working at a job any time in October, November, December 1972? | 1=Yes 2=No | E2 | 30 |
| At the present time, are you receiving welfare or public assistance? | 1=Yes 2=No | E2 | 41 |
| Number of teachers with more than 2 years ABE experience | | CL | 21, col. 1 |
| Number of teachers that attended ABE workshop (12 hours or less) | | CL | 22, col. 1 |
| Emphasis on preparation for GED studies | 3=Great 2=Some 1=Not emph. 0=None | CL | 30 |
| Emphasis on preparation for job improvement | 3=Great 2=Some 1=Not emph. 0=None | CL | 31 |
| Emphasis on preparation for grade level advancement | 3=Great 2=Some 1=Not emph. 0=None | CL | 33 |
| Emphasis on teaching parents to assist children in school | 3=Great 2=Some 1=Not emph. 0=None | CL | 34 |
| Job-related instructional materials (language) | 3=Always 2=Usually 1=Sometimes 0=Rarely or never | CL | 37, row 1 |
| Job-related instructional materials (computation) | 3=Always 2=Usually 1=Sometimes 0=Rarely or never | CL | 37, row 2 |
| Commercially prepared tests to determine placement (computation) | 3=Always 2=Usually 1=Sometimes 0=Rarely or never | CL | 40, row 2 |

Table E-1. (Continued)

| Variable | Code | Source | Question No. |
|---|---|---|---|
| Commercially prepared tests to measure improvement (computation) | 3=Always 2=Usually 1=Sometimes 0=Rarely or never | CL | 41, row 2 |
| Post-program placement services available | 3=Always 2=Usually 1=Sometimes 0=Rarely or never | CL | 43 |
| Student determined rates of progress (language) | 3=Always 2=Usually 1=Sometimes 0=Rarely or never | CL | 44, row 1 |
| Student selected goals, methods, materials (language) | 3=Always 2=Usually 1=Sometimes 0=Rarely or never | CL | 45, row 1 |
| Student participation in evaluation and improvement of materials and methods (language) | 3=Always 2=Usually 1=Sometimes 0=Rarely or never | CL | 46, row 1 |
| Presence and use of mechanical equipment | 0=No 1=Yes | CL | 48 |
| Total number of sessions attended (November 71 thru June 72) | | ATT | QATITLAT* |
| Attended at least once in each month from November 71 thru March 72 | 1=Yes 2=No | ATT | DIDNT* |
| County median school years completed for persons over 25 | | CENSUS | CLCOMSYC* |
| County percent of civilian labor force unemployed | | CENSUS | CLCOPUCL* |
| County percent families below poverty level | | CENSUS | CLCOPFIB* |

* Label for a non-questionnaire variable.

The sources listed in Table E-1 are as follows. (See Appendix C for reproductions of questionnaires as they were actually given.)

| | |
|---|---|
| E1 | Initial Enrollee Interview. |
| E2 | Post-Program Enrollee Interview. |
| CL | Class Instructor Interview. |
| ATT | Attendance Summary (last page of class instructor interview). |
| CENSUS | 1970 Census data. |

Multiple Regressions with Class as Unit of Analysis. Some multiple regressions were developed with the ABE class as the unit of analysis. Three outcome class variables were created for this purpose: mean class grade equivalent reading gain, mean class grade equivalent math gain, and mean class difference between earnings in 1972 and earnings in 1971. Means were computed only for those classes that had four or more observations for the outcome variable of interest.

Each of these three dependent variables was regressed on the following set of independent variables: all variables from the class file and the three socio-economic variables based on census data. Stepwise multiple regressions for mean reading gain and for mean earnings gain were not statistically significant at the .05 level.

In the case of mean math gain, however, the regression equation was statistically significant at the .01 level. This regression equation accounted for 79% of the variance of the dependent variable. The independent variables in this equation together with $R^2$ values and signs of beta weights are tabulated below. $R^2$ is the square of the multiple correlation coefficient. It is equal to the proportion of the variance of the dependent variable that is explained by an optimally weighted combination of best predictors. Values of $R^2$ are cumulative; that is, each value is based on all variables in the prediction equation at a given point. Beta weights represent the empirically-derived optimal regression coefficients or weighting factors applied to variables to maximally predict the outcome variable, when

variables are expressed in standardized score form. The algebraic sign of the beta weight indicates the direction of relationship between each predictor and the outcome variable, based on the given coding of response alternatives. Source is in the same form as used in table E-1.

| Source | Independent Variable | $R^2$ | Sign of Beta Weight |
|---|---|---|---|
| CL, Q31 | Preparation for job improvement | .19 | + |
| CL, Q22 | No. of teachers with 12 hours or less training | .40 | - |
| CENSUS | County percent unemployed | .50 | - |
| CL, Q45 | Students select goals (language) | .59 | - |
| CL, Q40 | Commercially prepared tests for placement (computation) | .66 | - |
| CL, Q34 | Emphasis on teaching parents to assist children in school | .73 | - |
| CL, Q37 | Job related instructional materials (computation) | .79 | + |

This result is of interest not only for the amount of variation that is explained but also because of the directions of relationship between mean math gain and the independent variables. The greater the emphasis on job improvement and the greater the use of job related computational instructional materials, the better the outcome. Confirmation of this relationship was obtained by means of one-way analysis of variance comparisons of mean math gains with individual predictor response categories. These comparisons also showed that those classes which put greater emphasis on preparation for job improvement and on the use of job-related instructional materials for computation tended to have higher mean math gains.

The independent variables entering as predictors with negative beta weights are difficult to interpret. Classes which had teachers with 12 hours or less of specialized ABE training tended to have less favorable outcomes. However, because

of the structure of the questionnaire, those classes without such teachers and which did better in math gains could have had either teachers with no specialized training or teachers with more than 12 hours training. Also, the county unemployment rate varied negatively with improvement. Obviously this is not a causal variable, but is related to the general socioeconomic environment. This result suggests that the worse the socioeconomic milieu, the more difficult it is to attain math gains in the classroom.

Classes where students selected goals (language instruction only, not computation), where emphasis was placed on teaching parents to assist children in school, and where commercially prepared tests were used for placement purposes (instruction in computation only, not in language) also tended to have smaller math gains. This hodgepodge of relationships suggests little if anything of relevance for judging the effectiveness of different classroom methods. Why should it make more difference not to emphasize teaching parents to assist children in school than it does either to emphasize or not to emphasize teaching computation? Questions like this are impossible to answer on the basis of the present analysis.

Multiple Regressions with Student as Unit of Analysis. Regressions of outcome (output) variables on predictor (input) variables were computed for all students and for race-sex subgroups. Highlights of these analyses are presented below, but should be interpreted with considerable caution. Large within-group variances were present, as well as limited sample sizes, since measurements were available only for the 440 students who took both initial and final tests.

Residual scores were regressed on the set of independent variables of Table E-1. (The four groupings were: black males, black females, non-black males, non-black females. "Non-black" included both "white" and "other.")

Table E-2 presents multiple regression results for all students together ("All") and for the four race-sex groupings ("NB-M" = non-black males, "NB-F" = non-black females, "B-M" = black males, "B-F" = black females). Rows contain the same 37 independent variables listed in Table E-1, in the same order.

Table E-2. Multiple Regression Results

| Dependent Variable | Residual Raw Reading Gain | | | | | Residual Raw Math Gain | | | | | Residual Earnings Gain | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Significance | | | | | | | NS | | | | | | NS | | |
| Group | All | NB-M | NB-F | B-M | B-F | All | NB-M | NB-F | B-M | B-F | All | NB-M | NB-F | B-M | B-F |
| $R^2$ | .084 | .287 | .353 | .427 | .186 | .108 | .200 | .450 | .317 | .347 | .115 | .210 | .193 | .403 | .238 |
| E1, Q3 | | | | -.130 | | | | | -.117 | | | | .193 | | |
| E1, Q9 | | | | | | | .127 | -.341 | | | | | | | |
| E1, Q21 | | | .280 | | | | | | | | .088 | | | -.334* | |
| E1, Q23 | | | | -.385 | .166 | | | | | -.270 | | -.182 | | | |
| E1, Q26 | | | | .071 | | .020 | | | .076 | | | | | | |
| E1, Q31 | | | | .406 | | | | | | | | | -.096 | | -.117 |
| E2, Q6 | .035 | .099 | .260 | | | | | | | | | | .032 | | |
| E2, Q15A | | | | .348 | | | .065 | | | -.125 | | | | | |
| E2, Q17 | -.043 | | -.077 | | | | | | | | | | | | |
| E2, Q18A | | | | | | | | | | | | | | | |
| E2, Q18B | | | | | | | -.041 | | | | .110 | .191 | | | |
| E2, Q21 | -.050 | | -.225 | | -.186 | | | .304 | | -.215 | | | | | |
| E2, Q22 | | | -.340 | | | | -.085 | -.405 | | | | | | | |
| E2, Q24 | | | | | .077 | | | -.172 | | | | | | -.403 | -.187 |
| E2, Q27 | | | | | | | | -.375 | | | | | | | |
| E2, Q30 | .080 | | | -.427* | | | | | | | | | | | -.166 |
| E2, Q41 | | | | | | -.092 | | | -.295 | | .063 | | | .352 | |
| CL, Q21,Col.1 | | | | | | -.098 | -.139 | | .317 | | -.105 | | -.117 | | -.213 |
| CL, Q22,Col.1 | | | | | | | | -.271 | | -.347 | | -.200 | | -.378 | |
| CL, Q30 | | .228 | | | | | | | | | | .150 | | -.266 | |
| CL, Q31 | | | | | | .056 | | | | .306 | | -.170 | -.152 | | |
| CL, Q33 | .023 | | | | .132 | -.084 | | | | | | | .138 | | |
| CL, Q34 | .076 | | .188 | | | | | | | | | | -.077 | | -.075 |
| CL, Q37,Row 1 | | | | | | | .200 | | | | .115 | | .180 | | |
| CL, Q37,Row 2 | -.084 | .287 | -.130 | | | | | | | .179 | | -.210 | .058 | | |
| CL, Q40,Row 2 | | -.206* | | | | -.066 | | -.450 | | | | | .168 | | |
| CL, Q41,Row 2 | | .159 | | -.271 | | | .153 | | | -.065 | | | | | |
| CL, Q43 | | | | | | | | .425 | | .328 | .046 | .136 | | .219 | .139 |
| CL, Q44,Row 1 | | | .322 | | | | .187 | | | | -.080 | -.085 | | -.132 | |
| CL, Q45,Row 1 | | | | -.231 | | -.039 | | -.118 | | -.288 | | | | | .238 |
| CL, Q46,Row 1 | | | | | | -.108* | | | | | | .037 | | | -.225 |
| CL, Q48 | .071 | .253 | | | .151 | | .106 | | -.263 | .245 | | | | | |
| QATITLAT | | .274 | | .182 | | | | | | | .100* | | | | |
| DIDNT | | | .353 | | | -.103 | | | -.171 | | .094 | .113 | | .302 | |
| CLCOPUCL | .066 | | .305 | | | | -.171 | | | | | | | | |
| CLCOMSYC | .057 | .184 | | | | | | .232 | | | | | | | |
| CLCOPFIB | | | | -.321 | | -.076 | | | | | -.027 | | | | -.199 |

Each column represents a different regression equation. All regressions are statistically significant at the .05 level unless the contrary is indicated by an "NS" in the top row labelled "Significance." Each entry in the row labelled "$R^2$" is the square of the multiple correlation coeffecient for the column regression. Each numerical entry indicates $R^2$ for the regression equation that has as independent variables the row variable as well as all variables with lower $R^2$. All beta weights are positive unless a minus sign is entered above the first digit of $R^2$. An asterisk above the last digit of $R^2$ indicates that the beta weight and the bivariate correlation coefficient have opposite signs. If no $R^2$ entry appears in a particular cell, it indicates that that row variable did not contribute to the prediction process for that column.

In the equations with outcome variable residual raw reading gain, certain variables appeared in two of the four race-sex regression analyses and in the overall analysis as well, indicating some generality. These variables, together with the analyses in which they occurred, are presented below.

| Variable | Present in Regression Analyses for |
|---|---|
| Extent of writing ability improvement in last year | Non-black females,* black females* |
| Presence and use of mechanical equipment | Non-black males, black females |
| Liking for basic education methods, compared with grade school | Non-black males, non-black females |
| Job related instructional materials (computation) | Non-black males, non-black females* |

*Negative relationship with reading gain for this race-sex grouping.

Examining the pattern of relationships for these four variables, one occurred for both groups of the same sex (e.g., writing ability improvement) and two occurred for both groups of the same race (e.g., liking for basic education methods). Presence and use of mechanical equipment and an attitudinal variable, liking for basic education methods over those of grade school, were positively related to reading gain. Beta weights for the variable, job related instructional materials (computation), did not have consistent or readily interpretable signs.

In the equations with residual raw mathematics gain as an outcome variable, one variable, presence and use of mechanical equipment, entered three of the four subgroup analyses. It did not enter the regression equation for non-black females. Its effect was negative for black males and positive for the remaining two subgroups. However, it did not enter the overall regression analysis. The two variables which entered two subgroup analyses and the overall analysis were: number of teachers with more than two years of ABE experience and student-selected goals, methods, and materials (language). Both of these variables were class variables. The effect of the latter variable was negative in all three cases. This suggests that for fixed values of the other independent variables, the more the student selects goals, etc. in language instruction, the worse the outcome with respect to mathematics gain.

For the outcome variable, residual 1972 earnings gain, four variables entered subgroup analyses and the overall analysis. These were: number of teachers with more than two years of ABE experience, student-determined rates of progress (language), availability of post-program placement services, and attendance at least once per month (November 1971 - March 1972). The latter two variables were positively related to earnings gain, yet only availability of post-program placement services is clearly an interpretable result. The direction of scoring the other predictors renders the empirical results difficult to interpret.

Geographical Differences in Educational Gains. One-way analysis of variance tests were performed on grade equivalent reading gains and on grade equivalent math gains to determine whether geographical differences were statistically

significant. In the case of reading gains, differences were found to be significant at the .01 level between states and also between localities. The same tests for math gains showed no statistically significant differences at the .05 level either between states or between localities. This suggests that differences in methodology for teaching math were not reflected in outcomes in ABE classrooms.

Conclusions. The evidence cited in this appendix does not readily lend itself to clear-cut conclusions. Some general indications of ABE program effectiveness do exist, however, for certain groups of ABE participants and certain types of outcome measures.

1. ABE class environments which stress job improvement and job related computational instructional materials can foster gain in mathematics.

2. Individual gains in reading seem related to the presence and use of mechanical equipment. Individual gains in mathematics seem related to the number of teachers who have more than two years experience in ABE. Individual gains in earnings also seem related to the extent of post-program placement services which are available.

3. More intensive analyses of differences in ABE teaching methods than were permissible within the scope of this study need to be conducted.

## APPENDIX F - ABSTRACT OF A MULTIPLE DISCRIMINANT ANALYSIS BASED ON DATA FROM THIS STUDY

Technically inclined readers of this report may wish to consult a recent dissertation which used some of this study's data as the basis for multiple discriminant analyses. The dissertation is, An Analysis of the Dropout Phenomenon in the National Adult Basic Education Program, by Campbell Hugh Greenup, Doctor of Philosophy in Education, University of California, Los Angeles, 1973.

The abstract of the dissertation reads, in part:

> The U. S. Office of Education's "A Longitudinal Evaluation of the Adult Basic Education Program" was the data source for a multiple discriminant analysis classification of ABE enrollees into groups named "dropout" and "non-dropout," for the purpose of future decision assistance in designing basic education classes specifically tailored to individual needs and counseling and guidance for dropout prevention. A very small proportion of the sample could be classified as illiterate or near-illiterate in math or reading on the basis of their Tests of Adult Basic Education scores. Bias resulting from missing data may have beclouded the findings somewhat. A short list of questions selected (1) subjectively and then (2) statistically by their contribution was drawn from in-person interviews of 1,448 ABE enrollees near the start of the 1971-72 school year. Math scores of early 1972 were selected also by the multiple discriminant analysis.
>
> About two-thirds of the subsample remaining after case exclusion due to missing values were correctly classified into the two groups. By consideration of bias, it was supposed that three groups had been identified as follows: (1) an almost entirely missing subpopulation--the basic education beginners; those who might score below the third grade level in math or reading, (2) ABE non-dropouts, who tended to less frequently report English as their home language, report a slightly lower prior grade completed in earlier school (mean: about the 8th grade) and score higher (mean: 7th grade) on math, and (3) ABE dropouts who tended to state higher prior grade completed in school (mean of 9.7), less frequent plans to attend ABE classes in the future, more frequently report English as the language at home as well as tending to score higher on math (mean: 7.0).

As Greenup points out, his definition of "dropout" is arbitrary and is not proposed for broad use. The definition given on page 26 of the dissertation (see also pages 79 and 90) identifies a dropout as a student who attended an ABE class at least once in November 1971 and then missed all classes during at least one of the months from December 1971 through March 1972 inclusive.

Using this definition, he is able to show that 53% of ABE students did not drop out. Males and females drop out to nearly the same degree; students not on welfare drop out to approximately the same extent as students who are on welfare. However, a significant difference in dropout rate is found between students with different initial reading scores: 82% of those who drop out score at the fourth grade and above, whereas only 68% of non-dropouts score this high.

## APPENDIX G - DESCRIPTION OF MAGNETIC TAPE DATA FILES

In order to preserve data collected or generated during the course of this study, a magnetic tape containing 20 data files has been created. All data are coded so as to ensure confidentiality of information and anonymity of respondents. The tape, along with a tape dump printout, has been delivered to the Office of Planning, Budgeting and Evaluation, U. S. Office of Education.

Overview of Tape Contents. Twenty data files were created. The first eight are in binary coded decimal (BCD) format, created by the software package SPSS (Statistical Package for the Social Sciences). The next nine files are in 80-column card image format. Here essentially the same data are stored as in the first eight files but in a more standardized format. The next two files contain program modifications to the statistical program BMD07M. The final file contains the IBM System 360 Job Control Language (JCL) which produced the tape. The 20 files use about 20% of the 2400 feet of storage on the tape.

Technical Characteristics of the Tape. The tape was created on an IBM System 360/model 91KK computer under the MVT Operating System, Release 21.7, using the utility program IEBGENER. The tape is a nine-track, 1600 bpi (high density) tape containing standard labels for all files. Only files 1 through 20 should be accessed as sequential data sets. The tape is labelled HUGH01.

IBM System 360 Job Control Language (JCL) for Accessing Tape Files.

Files 1 - 8 (Binary Coded Decimal Format):

```
//TAPEFILE DD DSNAME=XXX,UNIT=TAPE9,DISP=(NEW,CATLG),
//            DEN=3,LABEL=(Y,SL),VOLUME=SER=HUGH01,
//            DCB=(BLKSIZE=28752,LRECL=2008,DSORG=PS,RECFM=VB)
```

Here files 1-8 are being catalogued. XXX = the data set name of a particular data file, to be supplied in the next section, and Y = the data set sequence number (2, 3, 4, etc.). If files 1-8 are placed on disk, substitute in the above JCL statement: UNIT=SAVE, BLKSIZE=7294, and add SPACE specification as needed.

Files 9-20 (Card Image Format):

```
//TAPEFILE DD DSNAME=XXX,UNIT=TAPE9,DISP=(NEW,CATLG),
//            DEN=3,LABEL=(Y,SL),VOLUME=SER=HUGH01,
//            DCB=(BLKSIZE=32000,LRECL=80,DSORG=PS,RECFM=FB)
```

As with files 1-8, XXX and Y are defined similarly.

Conventions Used in Naming Data Sets (Files). All data sets or files have unique names of 8 continguous characters, as, "ABXXXXXX." AB refers to this Adult Basic Education study. Character 3 may refer to D (for data; raw data in card image form) or V (representing a SPSS SAVE FILE). For the most part, characters 4 and 5 follow these rules:

- A or AT = data from attendance summaries prepared by instructors
- C or CL = data from class instructor questionnaires
- P = data from program director questionnaires
- E = data from initial enrollee questionnaires (E1)
- E2 = data from second enrollee questionnaires (first followup)
- E3 = data from third enrollee questionnaires (second followup)
- T1 = initial test data
- T2 = final test data

Characters 5 through 8 generally represent either the data of data file creation or the quantity of types of card images in a particular data file. The characters A, B, or AB refer to the sampling procedure which labelled two groups of students as Sample A and Sample B.

Contents of Tape Files. The following table presents a summary of each file's contents and data set name (DSNAME). SPSS SAVE FILE names also are supplied for files 1-8. A definition of this type of file appears in the SPSS Manual (McGraw-Hill, 1970) on page 55. See also "Conventions Used in Naming Variables," below.

| FILE NUMBER | ABE DATA/COMMENTS/CREATION DATE | DATA SET NAME | SPSS SAVE FILE NAME |
|---|---|---|---|
| 1 | E3 data plus created variable STAYED73. 9/8/73. | ABV3 | FILE3 |
| 2 | Measures from all questionnaires, tests, census data and composite variables. Used for stepwise multiple linear regression analyses. 8/4/73. | ABV804 | FILE48 |
| 3 | Data from E1, E2, T1, T2, AT, and CL. Requires a SPACE allocation of 120 disk tracks. | ABV616 | JUNE16 |
| 4 | The basis of file 3. 7/22/73. | ABV722 | FILE46 |
| 5 | Attendance data. 9/30/73. | ABVA | AT930 |
| 6 | Class data. 6/23/73. | ABVC623 | C623 |
| 7 | T1 and T2 reading and math tests, as well as personal data collected on test booklets. 10/13/72. | ABVT1013 | T1011 |
| 8 | Program questionnaire data. 5/6/73. | ABVP45 | P45 |
| 9 | T1 and T2 raw data after editing. One card image per data record. | ABDT1011 | * |
| 10 | Class data. Two card images per data record. | ABDCL | * |
| 11 | Census data. | ABCLSES | * |
| 12 | E1 data. Two card images per data record. | ABDE13YK | * |
| 13 | E2 data. Three card images per data record. Contains 1 blank card image for students lacking E2 data. Number of students in this file therefore matches those in file 12. | ABDE2FAB | * |
| 14 | E3 data. Two card images per data record. | ABDE3AB | * |
| 15 | Program data. Four card images per data record. | ABDP107 | * |
| 16 | E1, attendance, T1 and T2 test data. Four card images per data record. Blank card images inserted where that type of data omission occurs. Contains card images for Sample A students. | A3D4ASS | * |

* Not saved in SPSS SAVE FILE (BCD) form.

| FILE NUMBER | ABE DATA/COMMENTS/CREATION DATE | DATA SET NAME | SPSS SAVE FILE NAME |
|---|---|---|---|
| 17 | Identical to file 16, except that it contains card images for Sample B students. | ABD4BSS | * |
| 18 | System control cards (IBM 360 JCL and UCLA BioMed program BMD07M) used in stepwise multiple group discriminant function analysis. | ABBC07MO | * |
| 19 | System control cards (IBM 360 JCL Linkage Editor) and modified FORTRAN IV subroutine source statements of UCLA BioMed program BMD07M which now directly computes the Correct Classification Index (CCI). Does not contain main BMD07M program nor other subroutines. See UCLA BioMed Computer Programs Manual (1971 edition, pp. 214a ff.) for JCL reference. Modified subroutine should compile and link edit under IBM 360 OS releases 21, 21.6 or 21.7). | B07MALL | * |
| 20 | IBM 360 JCL which created this tape. Uses systems utility program IEBGENER with a REGION=110K parameter required due to the high blocking factors employed. | ENDTAPE | * |

Conventions Used in Naming Variables. Since data files 1-8 were retained as SPSS SAVE FILES, the first portion of each file contains all descriptive characteristics, followed by the data records. Such file-defining information is available as: file name and label; variable names, labels and formats; variable values and value labels; missing data indicators.

The following table will assist in interpreting the names assigned to variables. Use of the SPSS DUMP statement (see the 1970 SPSS Manual, pages 49-50) will supply extended variable labels which are much more self-explanatory.

---

* Not saved in SPSS SAVE FILE (BCD) form.

| Character(s) Used in Variable Name | Usual Character Position, Counted from the Left | Meaning |
|---|---|---|
| Q | One | Questionnaire item number. |
| E | Two | E1. |
| E2 | Two and Three | E2. |
| E3 | Two and Three | E3. |
| T | Two | T1 and T2 tests. |
| A or AT | Two or Two and Three | Attendance. |
| C or CL | Two or Two and Three | Class. |
| P | Two | Program. |
| X | Three through last used | A question which was numbered but which had more than one part. |
| A numeral to the right of an X | Four through last used | Parts (as above) of a question. |
| An A, B, C, D or E to the right of an X | Three or Four | An element of an identifying code. A is State, B the Program, C the Class, D the student, and E the card type. |
| GE | One and Two | Grade equivalent of raw test score. |
| RD or RDG | After "GE" or "RAW" etc. as a descriptor | Reading. |
| MT or MTH | After "GE" or "RAW" etc. as a descriptor | Math. |
| RAW | Usually first | Raw score. |
| I | Last | Intervalized. |
| GN | Last | Gain expressed as a difference. |
| N | One | Number expressed as a quantity. |
| MN | One | Arithmetic Mean. |
| Z | One | Reciprocal. |
| Z2 | One and Two | 1 divided by a squared quantity. |

Tape Dump. A 135-page map of tape contents has been provided. This includes characteristics of data file contents for all of the 20 files. As a rule, the first 32,000 characters of each file are printed out. For some files this may represent the entire file. Where an underline character ( _ ) appears, this serves to graphically represent a data item for which no convenient symbol was available. This usually occurred in files 1-8 whose contents, as SPSS SAVE FILES, were stored in binary coded decimal form.

This tape dump was produced through the use of utility program TAPEUT, available at the UCLA Campus Computing Network.

References Cited in This Appendix.

Dixon, W. (Ed.). BMD Biomedical Computer Programs (Rev. Ed.). Berkeley and Los Angeles: University of California Press, 1971.

Nie, N.; Bent, D. H. and Hull, C. H. SPSS: Statistical Package for the Social Sciences. New York: McGraw-Hill, 1970.